Platform Accountability in the Age of AI, Music Streaming, and Digital Media

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Table of Contents

Foreword by Tift Merritt

The story delivered by streaming platforms, major labels and tech companies who make the money in the music economy is that the industry has completely adjusted to the streaming era– but the musicians who built that economy with their recordings are locked out of the building and know that story to be false. Plenty of money is being made using recorded music, but the musician is completely devalued.

It requires 312,827 streams for an artist to earn $100 from Spotify.
My monthly revenue from Spotify is about $30. 100,000 streams.
I give my record away for free, despite spending $40,000 to record it.

I am told I can make money touring; I don't know the last time you took a trip with a couple of friends, you *have* to pay. I am told this is all fair because I have access to new audiences–who never learn my name. I am told that if I were really a star, I'd be a star, while algorithms on streaming platforms center songs that are to the platform's economic benefit, or even AI-generated, requiring no royalty payment! What I see happening is truly talented people who have dedicated their lives to making music, like myself, are asking why participate at all in a system that is rigged against us and that lacks transparent accounting. A system that is unapologetic about exploiting our creative material to suit their business model, however they choose, even to train and replace us with generative AI. In an AI streaming economy, my music has no value at all other than to train generative models to produce music from which I receive no compensation.

Music has never been the easiest way to make money, and not something I do just to make money. When I was a little girl, I wanted to make something good out of the big things inside of myself. I was passionate about becoming a writer because conveying what is beautiful and hard about being human puts love, essential information, and deep connection into the world to make it a better place.

Stories Matter.

Because crippling the revenue infrastructure and resources of a collective community for profit without regard for the humans at the core is deftly possible and not without cost. This is strip mining in the new world.

But why should you care if you aren't a storyteller? AI is not affecting my job or my career, you say. Well, you probably know what it feels like to be moved, opened, and reminded of the best that is in us by a song. You should care because this story will repeat in other industries, other modalities and cripple other communities, until we interrupt the extraction, value the core dignity of human work and the implicit value of a human voice.

Introduction

The Protect Working Musicians Act of 2023, currently in committee in the U.S. House of Representatives, states:

> Music is a cultural treasure and a unique source of spiritual inspiration, emotional comfort, community connection, and joy. It is also a powerful economic driver that directly and indirectly supports nearly 2 million American jobs and almost $150 billion in annual economic activity.[1]

Music has been called the universal language.[2] It represents history, heritage, culture, and emotion. It can be simultaneously both universal and deeply personal. Broadly speaking, music can have an impact in three categories.

Music as an emotional, political, and financial catalyst

First, music is a widely used form of entertainment, pleasure, and emotional and physical healing. People perform, sing, listen to, and dance to music around the world. It is unique to cultures and globally accessible. It is a form of escapism. It lifts people from sadness. It has palliative aspects that echo this sadness and can be physically healing.[3]

Second, music is cultural heritage and political. As protest, both in public and in "hidden" ways[4] music has rallied and mobilized people to revolution and been censored by governments to stop that revolution. Music can carry public commentary on social ills and propose solutions.[5] Songs like Sam Cooke's *A Change Is Gonna Come* and Joan Baez's rendition of *We Shall Overcome* became anthems of the Civil Rights Movement.[6] Bob Dylan emerged as a leading voice of protest during the Vietnam War, using [7]his music to challenge injustice and advocate for peace, alongside artists like Marvin Gaye and Creedence Clearwater Revival.[8] In 1985, some of the biggest names in music at the time, including Michael Jackson, Cyndi Lauper, and Stevie Wonder, came together to record *We Are the World*, raising over $60 million to support famine relief efforts in Africa. Alternative rock band, Rage Against the Machine, uses their aggressive sound and politically charged lyrics to confront government oppression, corporate greed, and police brutality.

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[1] *Protect Working Musicians Act of 2023*, H.R. 5576, 118th Cong., introduced in House, September 19, 2023, https://www.congress.gov/bill/118th-congress/house-bill/5576.

[2] Samuel Mehr, et. al. (2019), "Universality and Diversity in Human Song." *Science* 366, eaax0868. DOI: https://www.science.org/doi/10.1126/science.aax0868.

[3] Justin Wildridge, "A Concise History of Music Therapy," CMuse, February 28, 2023,https://www.cmuse.org/concise-history-of-music-therapy/.

[4] James Scott, *Domination and the Arts of Resistance: Hidden Transcripts* (Yale University Press: New Haven, Connecticut, 1990).

[5] Tal-Chen Rabinowitch, "The Potential of Music to Effect Social Change," *Music & Science* 3 (2020): 1-6.

[6] Andrew Reese, *"How Can Music Inspire Social Change?" Facing History & Ourselves*, April 26, 2015, https://www.facinghistory.org/ideas-week/how-can-music-inspire-social-change.

[7] *"We Are the World,"* USA for Africa, accessed April 2, 2025, https://usaforafrica.org/we-are-the-world/.

[8] *"Popular Music During the Vietnam War,"* National Park Service, last updated August 22, 2023, accessed March 25, 2025, https://www.nps.gov/teachers/classrooms/popular-music-during-the-vietnam-war.

Third, music makes money. Music is an economic driver. People stream, listen to, and buy music, attend concerts, and invest in supporting artists. However, it is not always profitable enough for those who create it, except for the biggest names in the industry. Music labels have often been the more profitable actors than the creators in these relationships.[9]

This last category is a tension that deserves further exploration, which is the purpose of this study: to examine the question of inequitable rewards for artistic production through the lens of technology, audiences, and markets, and make some recommendations for fairer compensation practices. Technological advances have not just hindered the creative process for musicians and all artists but, in some cases, as shown in what follows, actively suppressed their ability to see financial remuneration for their work. AI use by online music streaming platforms has the potential to negatively impact even further the ability of human artists to protect their intellectual property and reach listeners. In some cases, AI is replacing human musicians as algorithms create new music from databases of existing human work, though some industry watchers do not believe complete replacement is imminent.[10]

These risks in the music industry are magnified due to market concentration in streaming platforms and the lack of ability for artists to negotiate on an even playing field with those companies. This market concentration is furthered by the largely unregulated collection and use of personal data to create profiles of musicians and listeners and use algorithms to decide what music the platform will provide to which users. While this market concentration and use of personal data carries risks for all individuals, the potential harms are particularly acute for children. Underlying all of these forces is a lack of transparency in how AI is being used to create music, target individual users, and decrease potential revenue for musicians.

Impact on Dignity of Work

Market concentration, the commercialization of personal data, and the impact on at-risk populations are not unique to just the music industry. Public policy actions to address the combined impact of these factors may be instructive for the impact of AI on other industry sectors.

This impact of AI on human musicians is possibly a "canary in the coal mine" example of how this technology will impact many other categories of human employment[11]–a 2024 study conducted by the Massachusetts Institute of Technology indicates that AI could impact nearly 25% of U.S. jobs in the near future.

Writers, software programmers, lawyers, accountants, graphic designers, architects, and many other professions are already seeing early signs of AI replacing job functions and suppressing

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[9] Recording Connection, *"How Do Record Labels Turn a Profit?"* June 23, 2022, https://recordingconnection.com/reference-library/how-do-record-labels-turn-a-profit/.

[10] Cheyenne DeVon, "There's 'no way' AI will completely replace human musicians, says award-winning composer—here's why," December 29, 2023. https://www.cnbc.com/2023/12/29/why-ai-cant-completely-replace-human-musicians.html

[11] Jewly Hight, "AI music isn't going away. Here are 4 big questions about what's next," NPR Music, NPR, April 25, 2024, https://www.npr.org/2024/04/25/1246928162/generative-ai-music-law-technology.

wages.[12] Experts remain divided on whether the new jobs created by the deployment of AI will mitigate the impact on employment, as has often happened in the past with technological progress.[13] However, many believe that this situation is exceptional: the Future of Jobs Global Report 2025 reveals that 41% of companies anticipate workforce reductions as AI becomes increasingly prevalent. AI has the potential to assist humans in scientific discovery, creative expression, healthcare innovation, and the development of climate solutions. However, while pursuing these critical goals, public policy should mitigate harms to the dignity of work. Examination of the current condition of the music industry and potential public policy responses may be a useful exercise to point towards similar actions that should be taken to protect human workers across the global economy.

Spotify as a Use Case

In the music streaming ecosystem, the most prominent actor is Spotify, which, as of 2024, commanded the largest share of the market.[14] This online platform is the most useful case to analyze, along with the music labels and the artistic producers it interacts with, as the role it has played and could continue to play has a potentially outsized effect on profits and innovation.

For example, when music is actively and intentionally consumed, it can unite audiences, create social change, and act as a messenger. However, Spotify's business model is designed to promote passive listening. Spotify "champions the lean-back listener," and pushes the streaming of "functional music," which is essentially ambient music for sleeping, studying, and relaxing.[15] Furthermore, Spotify encourages artists to produce more "chill" music by favoring it in editorial playlists, which are a crucial source of exposure and revenue for smaller artists.

When Spotify promotes passive listening to generate streaming activity, users are less likely to encounter music that challenges them. Furthermore, Spotify's hyper-personalized algorithm makes listening to music a solitary experience, which can limit exposure to a diverse range of perspectives. Listeners are often not exposed to thought-provoking art that pushes beyond mainstream conventions or offers meaningful social commentary: this music requires active, intentional engagement to be fully appreciated. The shift towards passive listening and hyper-personalized recommendations promotes conventional, mainstream music at the expense of challenging, thought-provoking works, and ultimately undermines democratic discourse. The use of AI in online music streaming is impacting musicians and listeners in two ways: (1) the generation of music without the involvement of human musicians, and (2) the inference of preferences from large amounts of personal data to recommend the music that maximizes profit for the platform. Given the history of music's role in free expression and the protection of

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[12] Bryan Robinson, *"Fears About AI Job Loss? New Study Answers If They're Justified," Forbes*, February 9, 2025, https://www.forbes.com/sites/bryanrobinson/2025/02/09/fears-about-ai-job-loss-new-study-answers-if-theyre-justified/.

[13] Reshad Hudson, "Could AI Replace American Workers," *WJBF News*, March 19, 2025, https://www.wjbf.com/news/washington-dc/could-ai-replace-american-workers.

[14] Dylan Smith, "Spotify, Apple, & Amazon Top 90% U.S. Streaming Market Share," Digital Music News, July 9, 2024, https://www.digitalmusicnews.com/2024/07/05/music-streaming-market-share-us/.

[15] Liz Pelly, *Mood Machine: The Rise of Spotify and the Costs of the Perfect Playlist* (New York: Atria/One Signal Publishers, 2025): 44.

democracy, the analysis of AI's impact on the delivery of music should be a top public policy activity.

Structure
This paper is broken down into four sections: (1) Intellectual Property, (2) Anticompetitive Practices, (3) Privacy, and (4) Protection of Children. Each section will have subsections including (a) an executive summary, (b) background information, (c) analysis, and (d) recommendations. Appendix A is a summary of the recommendations.

Intellectual Property

Executive Summary

In April 2023, the AI-generated song "Heart on My Sleeve" by @ghostwriter went viral, mimicking the voices of Drake and The Weeknd without their consent.[16,17] The song accumulated over 2.1 million streams globally and generated approximately $9,400 in revenue before being removed from major streaming platforms following copyright complaints from Universal Music Group. "Heart on My Sleeve" is just one example of how AI-generated music impacts artists' intellectual property. The song was notable because of how similar it sounded to the work of famous human artists. However, what may be more impactful is AI-generated music that uses human musicians' work as training data, but is not immediately identifiable as derived from those sources.

The current patchwork legal landscape provides artists with little protection from platforms training AI-generated music using their creative works. Artists have insufficient mechanisms to advocate for nonconsensual AI-generated music to be taken down or to advocate for fair payment systems.

The use of AI in music production in the age of music streaming has exposed:

1. A lack of clear legal protection for artists' intellectual property rights under the US Copyright Act and other copyright protections outside of the US,
2. A lack of payment for streams of AI-generated music created using human artists' creative works, as those streams are substituted for human music, and
3. A lack of best practices across platforms for notice and takedown of nonconsensual AI-generated music.

These gaps could exacerbate decreasing revenue for streams by human musicians, reduce incentives for original creation, and make it increasingly difficult for artists to reach listeners. If left unaddressed, such gaps could diminish the visibility of human artist music that drives social change and cultural movements.

In response, we recommend:

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[16] Nichola Rutherford, "Drake and The Weeknd AI Song Pulled from Spotify and Apple," BBC News, April 18, 2023, https://www.bbc.com/news/entertainment-arts-65309313.

[17] Mark Savage, "AI-Generated Drake and The Weeknd Song Goes Viral," BBC News, April 17, 2023, https://www.bbc.com/news/entertainment-arts-65298834.

1. Changes to copyright law in the US,
2. Industry group advocacy to ensure transparency of AI training data, and
3. Industry group establishment of a digital watermarking standard for AI-generated music.

Background

As technology has changed, especially with the emergence of the use of AI to create music and the increased concentration of music distribution in online streaming platforms, intellectual property laws have not been significantly adapted to adjust to changes in market dynamics.

Lack of Protection under the Law

The US Copyright Act. In the United States, the Copyright Act grants copyright protection to "original works of authorship."[18] The Act, however, also provides for the ability of "fair use" of the copyrighted work.[19] The language of the Act explains the interpretation of "fair use" as:

> In determining whether the use made of a work in any particular case is a fair use, the factors to be considered shall include—
>
> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
>
> (2) the nature of the copyrighted work;
>
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
>
> (4) the effect of the use upon the potential market for or value of the copyrighted work.[20]

The fact that human artists draw inspiration after listening to thousands of songs is part of the standard creative process and would fall under the definition of fair use. It is an open question of the degree to which using human-generated music to train AI models to produce music should also be considered as fair use. As AI-generated music is used on online streaming platforms, the analysis of element (4) above may produce different considerations. Specifically, and as described in more detail later in this paper, the economic incentives for platforms to make AI-generated music more prominent than human creative work may justify excluding the training of the AI model from the concept of fair use. If the law can provide clarity on this issue, then it will increase the importance of the degree to which platforms will have an obligation to remove the AI-generated music. Current law places much of the burden for removing copyright-infringing works on the copyright owners and the audience for the work.

Digital Millennium Copyright Act. The Digital Millennium Copyright Act (DMCA), enacted in 1998, plays a pivotal role in shaping how online platforms handle copyright infringement. Specifically, the DMCA's "safe harbor" provisions relieve platforms—such as websites, social media networks, and hosting services—of the obligation to proactively monitor or police user-

[18] U.S. Copyright Office. "Copyright Law of the United States (Title 17)," December 23, 2022. https://www.copyright.gov/title17/.

[19] 17 U.S. Code § 107

[20] 17 U.S. Code § 107

uploaded content for potential copyright violations.[21] Instead, the law establishes a notice-and-takedown framework, where platforms are required to act expeditiously to remove or disable access to infringing material once they receive a valid notification from a copyright holder.[22] As long as platforms comply with these procedures and do not have actual knowledge of infringing content, they are shielded from liability.[23]

By shifting the responsibility to copyright holders to identify and report infringement, the DMCA significantly reduces the compliance burden on platforms. Rather than requiring platforms to review millions of pieces of content in advance, the DMCA allows platforms to operate without pre-screening or constant surveillance of user activity.[24] Instead, they are only obligated to act after receiving specific complaints.

State-level law. In response to AI-generated digital replicas, several states have updated or introduced new laws in an attempt to cover gaps in federal legislation. Tennessee expanded its right of publicity to cover voice simulations and unauthorized acts beyond commercial purposes, including publishing and distribution.[25] Louisiana passed a law targeting deceased professional performers, prohibiting unauthorized use of their digital replicas in public or scripted performances that create the illusion of them performing a role.[26] New York amended its law to ban unauthorized digital replicas of deceased performers in scripted works or live musical performances if they deceive the public.[27] Both states include exemptions for free speech, such as parody, satire, commentary, newsworthy works, or incidental uses.

State laws addressing AI-generated replicas focus narrowly on unauthorized use of likenesses or voices, not the broader issue of uncompensated training on human-created works. These laws fail to address the fundamental distinction between human creativity and AI generation[28] These state laws have not addressed the question of whether compensation should be required for all training

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[21] *Digital Millennium Copyright Act*, 17 U.S. Code §§ 512 (1998).

[22] U.S. Copyright Office, *The Digital Millennium Copyright Act of 1998: U.S. Copyright Office Summary*, (December, 1998), https://www.copyright.gov/legislation/dmca.pdf.

[23] Jennifer M. Urban, et al., "Notice and Takedown in Everyday Practice," UC Berkeley Public Law Research Paper No. 2755628, March 30, 2016, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2755628.

[24] U.S. Copyright Office, *Section 512 Study: Report of the Register of Copyrights*, (May 2020), https://www.copyright.gov/policy/section512/.

[25] "PHOTOS: Gov. Lee Signs ELVIS Act Into Law." Accessed March 25, 2025. https://www.tn.gov/governor/news/2024/3/21/photos--gov--lee-signs-elvis-act-into-law.html.

[26] Vittone, Matt. "Posthumous Right of Publicity Law Covering Digital Replicas Goes Into Effect in Louisiana (via Passle)." Passle, July 6, 2022. https://advertisinglaw.fkks.com//post/102hscj/posthumous-right-of-publicity-law-covering-digital-replicas-goes-into-effect-in-l.

[27] Lopez, Miguel A., Brad Kelley, Shreya Mantrala on January 21, and 2025. "New York's Digital Replica Law and Its Impact on Artificial Intelligence and the Entertainment Industry." Littler Mendelson P.C., January 21, 2025. https://www.littler.com/publication-press/publication/new-yorks-digital-replica-law-and-its-impact-artificial-intelligence.

[28] Pirro, Dr Nicholas J. "AI and Music The Ethics of Uncompensated Training on Paid Artists' Work." *Pyrrhic Press Blog*, February 12, 2025. https://www.pyrrhicpress.org/articles/2373753_ai-and-music-the-ethics-of-uncompensated-training-on-paid-artists-work.

uses, not just when AI replicates specific artists, because the value of AI-generated music derives from the collective labor of human creators whose works form the training dataset.[29]

The EU AI ACT. Outside of the United States, the EU's AI Act, which will take full effect in August of 2026, allows developers to data-mine copyrighted material on the internet for training AI models unless the copyright holder explicitly objects.[30] Under Recital 105 of the AI Act, providers must obtain authorization from rights holders unless their use qualifies for the Digital Single Market Directive's text and data mining exceptions, which allow commercial data mining only if rights holders have not opted out.[31] To operationalize this, the Act introduces a disclosure template obliging providers to publish a "sufficiently detailed summary" of training data, including modalities (text, audio, etc.), sources (e.g., specific websites or databases), and compliance measures for copyrighted content.[32] However, critics argue this requirement is impractical due to fragmented copyright ownership and the lack of standardized metadata, making it nearly impossible to comprehensively identify all protected works in training datasets.[33]

The UK AI Action Plan. The UK AI Action Plan proposes reforms to copyright law aimed at enabling AI developers to train models using copyrighted material while attempting to balance rights holders' interests. The UK government is proposing that AI companies could use online material for text or data mining without respecting copyright. Instead, artists would have "rights reservation" or the ability to opt out.[34] Under the plan, AI developers would need to comply with transparency obligations, disclosing training data sources and methods, though specifics remain undefined beyond a commitment to "greater trust and transparency" through potential legislative measures.[35] The UK's proposal has led to widespread protest with over 1,000 artists coming together to release a silent album titled 'Is This What We Want?,' with critics arguing that it is

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[29] Pirro, Dr Nicholas J. "AI and Music The Ethics of Uncompensated Training on Paid Artists' Work." *Pyrrhic Press Blog*, February 12, 2025. https://www.pyrrhicpress.org/articles/2373753_ai-and-music-the-ethics-of-uncompensated-training-on-paid-artists-work.

[30] Daniel Tencer, "UK'S Plan to Make Copyright Law More AI-Friendly Raises Concerns," Music Business Worldwide, January 14, 2025, https://www.musicbusinessworldwide.com/uks-plan-to-make-copyright-law-more-ai-friendly-raises-concerns/

[31] "Artificial Intelligence Act & Copyright," May 24, 2024. https://www.taylorwessing.com/en/insights-and-events/insights/2024/05/ai-act-und-copyright.

[32] Coraggio, Giulio. "EU AI Act: New Disclosure Template Sparks Copyright Disputes." *GamingTechLaw* (blog), January 31, 2025. https://www.gamingtechlaw.com/2025/01/eu-ai-act-new-disclosure-template-sparks-copyright-disputes/.

[33] Geiger, Christophe. "EU Copyright Needs Reform to Spur Fair AI." CEPA, February 25, 2025. https://cepa.org/article/eu-copyright-needs-reform-to-spur-fair-ai/.

[34] Laura Kuenssberg, "Sir Paul McCartney: Don't Let AI Rip off Musicians." BBC News, January 26, 2025, https://www.bbc.com/news/articles/c8xqv9g8442o.

[35] GOV.UK. "Copyright and Artificial Intelligence." Accessed March 25, 2025. https://www.gov.uk/government/consultations/copyright-and-artificial-intelligence/copyright-and-artificial-intelligence.

impossible for artists to notify thousands of different AI services and monitor their work online as may be required by an opt-out policy.[36]

Fair Payment to Artists

Payment for Human Artist Music as Training Data. AI-generated music is a byproduct of human-generated music. However, some algorithm developers for AI-generated music have not been transparent about the sources of their input training datasets. Streaming platform policies governing how AI is used change frequently enough, making it difficult for artists to understand how their content may be used in AI production.[37] The lack of transparency around what music is used as training data will present challenges for any effort to compensate artists for that use of their music. This has prompted major music labels Sony Music Entertainment, Universal Music Group, and Warner Records to file a copyright infringement lawsuit against Suno AI and Udio AI, as they claim these two companies exploited the recorded works of artists under their recording label.[38] The Recording Institute of America is asking for damages up to $150,000 per song, which could amount to millions of dollars in total infringement damages.[39]

Competition for Streaming Revenue. Spotify, Apple Music, Amazon Music, and other music streaming platforms use a 'weighted system', or on a pro-rata basis, to determine royalty payout to artists, meaning revenue is pooled and allocated based on streaming popularity.[40] The surge of AI-generated music on streaming platforms also means human artists are competing for consumers' streams, as revenue is diverted from human artists to entities creating AI-generated music. As AI-generated music gains traction, it diverts income from human artists, producers, and labels, reshaping the traditional revenue model.[41]

Some artists have taken a proactive approach to this concern by partnering with generative AI companies, which are allowed to use their voice and music for algorithm training, if the artists receive a percentage of the generated royalties. Singer/songwriter Grimes has adopted this model, partnering with CreateSafe, in exchange for 50% royalties in music made from her

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[36] "Music Stars Release Silent Album in Protest Against UK AI Copyright Plans," Al Jazeera, February 25, 2025, https://www.aljazeera.com/news/2025/2/25/music-stars-release-silent-album-in-protest-against-uk-ai-copyright-plans.

[37] Hansen, Devon. 2024. "AI Music on Spotify: Everything We Know so Far." LANDR Blog. August 13, 2024. https://blog.landr.com/ai-music-on-spotify/

[38] "Record Labels Sue AI Song-generators Suno, Udio for Copyright Infringement," AP News, June 24, 2024, https://apnews.com/article/ai-music-generators-sued-suno-udio-riaa-37a398d326ebb53105538f0d1088233e.

[39] Crowell & Moring LLP. "Major American Music Labels Sue Generative AI Music Platforms in First Case of Its Kind over AI Audio." Crowell & Moring LLP, June 2024. https://www.crowell.com/en/insights/client-alerts/major-american-music-labels-sue-generative-ai-music-platforms-in-first-case-of-its-kind-over-ai-audio.

[40] Meghan O'Donnell, "So, How Exactly Do Streaming Services Calculate Royalties?" Trolley, December 4, 2024, https://trolley.com/learning-center/so-how-exactly-do-streaming-services-calculate-royalties/.

[41] James Murtagh-Hopkins, "An Open Letter to the Artist and Songwriter Community = Why We Must Call Time Out on TikTok," UMG, February 2, 2024, https://www.universalmusic.com/an-open-letter-to-the-artist-and-songwriter-community-why-we-must-call-time-out-on-tiktok/.

content.[42] However, this business model only works for prominent artists with adequate resources to negotiate royalties and legal terms with AI companies.

Notice & Takedown

The music industry has taken steps to ensure music protection in the age of AI, but music streaming platforms have been reluctant to adopt policies that protect artists' work.

YouTube. While YouTube's terms of service forbid automated scraping of its videos and associated data, Proof News and Wired investigators found that companies have been training AI models on YouTube content without creator permission, pointing to gaps in YouTube's enforcement.[43] More specifically, YouTube uses Content ID, an automated content identification system that scans uploaded videos for matches to copyrighted audio and visual files in its database. If a match is found, the video receives a Content ID claim, which can result in different actions based on the copyright owner's settings: blocking the video from being viewed, monetizing it by running ads, or tracking its viewership statistics.[44] YouTube has also instituted transparency tools in its creator studio to enable creators to share when they produce altered or synthetic content, which could include the use of generative AI.

YouTube also requires creators to self-disclose AI-generated content, which appears in the video description.[45] In addition, YouTube includes a process for 'music partners' to request the removal of AI-generated music content that mimics an artist's unique singing or rapping voice. The evaluation of removal requests will consider many factors, including whether the content is news reporting, analysis, or critique of the synthetic voice.[46] This process will be made available first to labels or distributors representing artists participating in YouTube's early AI music experiments.

Spotify. Spotify has adopted a different approach to AI-generated content, allowing it to be uploaded, as long as it 'does not purposefully impersonate another human artist without legal consent'.[47] However, while Spotify's developer policy prohibits the use of Spotify content to "train" or "ingest Spotify content" into a machine learning or AI model, it does not prohibit the

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[42] Antonio Pequeño IV, "Grimes Helps Artists Distribute Songs Using Her AI Voice—If They Split Royalties. Here's How It Works." Forbes, June 13, 2023, https://www.forbes.com/sites/antoniopequenoiv/2023/06/12/grimes-helps-artists-distribute-songs-using-her-ai-voice--if-they-pay-royalties-heres-how-it-works/.

[43] Eric Hal Schwartz, "Investigation Finds Companies Are Training AI Models With YouTube Content Without Permission," TechRadar, July 16, 2024, https://www.techradar.com/computing/artificial-intelligence/investigation-finds-companies-are-training-ai-models-with-youtube-content-without-permission.

[44] "YouTube Content ID," accessed March 28, 2025,. https://support.google.com/youtube/answer/2797370?hl=en.;"How Does YouTube Responsibly Approach Generative AI?" How YouTube Works, Youtube, accessed March 28, 2025, https://www.youtube.com/howyoutubeworks/our-commitments/responsible-ai/.

[45] If the video pertains to sensitive issues like "health, news, election or finance" YouTube will also display a label on the video in the player window. If creators fail to disclose such content, YouTube will place labels, particularly on videos addressing sensitive topics.

[46] Jennifer Flannery et. al., "Our Approach to Responsible AI Innovation," Youtube Blog, September 9, 2024, https://blog.youtube/inside-youtube/our-approach-to-responsible-ai-innovation/.

[47] Zoe Kleinman, "Spotify Will Not Ban AI-made Music, Says Boss," BBC News, September 25, 2023, https://www.bbc.com/news/technology-66882414.

use of music outside of Spotify's service to create music that is then uploaded to Spotify.[48] There are multiple examples of suspected entirely AI artists with large audiences on the platform.[49]

Musicians and listeners have limited ability to flag AI-generated music that may violate intellectual property rights. Spotify does not disclose to users whether an individual song is AI-generated music. The company gives out a 'verified artist' badge, which could, in theory, help distinguish human artists.[50] Also, users may be able to use anonymous forms to report AI-generated content that violates Spotify's policies. However, Spotify's request that artists contact them if they believe content "infringes intellectual property rights or otherwise violates the law appears to ignore the challenges for musicians to make these determinations."[51]

Apple Music. Apple Music claims it only allows human-made content to be uploaded to ensure no instances of copyright infringement. However, the platform does not provide any mechanisms to verify the legitimacy of the uploads.[52]

YouTube Music. YouTube has partnered with UMG and a collective of artists to conduct research on generative AI in the music industry to see how it can increase creativity and the user experience.[53]

In response to AI-generated content uploaded to music streaming platforms, the music industry has changed its stance on AI-generated content and algorithm training from general rights protection to specific licensing frameworks as AI algorithms are ingesting massive quantities of copyrighted material.[54] In January 2024, the Warner Music Group stated that use of copyrighted music to train algorithms should require a free-market license.[55] This was followed up in May 2024 by Sony Music, which released the 'Declaration of AI Training Opt Out' policy, explicitly prohibiting any unauthorized use of their copyrighted material as input into algorithm training.[56]

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[48] "Spotify Developer Policy," Spotify for Developers, May 8, 2023, https://developer.spotify.com/policy#iii-some-prohibited-applications.

[49] Oksana Zele, "The Spotify Scam: How AI Fakes Are Drowning Out Real Artists," Kill the DJ, July 31, 2024, https://killthedj.com/spotify-fake-ai-artists/.

[50] "How to Get Verified" Spotify for Artists, accessed March 28, 2025, https://artists.spotify.com/en/blog/how-to-get-verified.

[51] "Report Content on Spotify." Spotify, accessed March 28, 2025, https://support.spotify.com/us/content-policy-reporting/.

[52] "Why Does AI-generated Content Violate the Policies of Streaming Platforms?" Indiefy Support, accessed March 28, 2025,https://help.indiefy.net/hc/en-us/articles/29837059341203-Why-does-AI-generated-content-violate-the-policies-of-streaming-platforms.

[53] Universal Music Group, "YouTube Announces AI Music Principles and Launches YouTube Music AI Incubator with Artists, Songwriters and Producers from Universal Music Group," August 21, 2023, https://www.universalmusic.com/youtube-announces-ai-music-principles-and-launches-youtube-music-ai-incubator-with-artists-songwriters-and-producers-from-universal-music-group/.

[54] U.S. Copyright Office, Universal Music Group, *Ex Parte Meeting Regarding the Copyright Office's Notice of Inquiry on Artificial Intelligence and Copyright [Docket No. 2023–6],* by Eric Berman et. al.(2024), https://www.copyright.gov/policy/artificial-intelligence/ex-parte-communications/letters/Universal-Music-Group-Apr-25-2024.pdf.

[55] "Making Impact Music: Warner Music Group's 2023 ESG Report," Warner Music Group, 2023, https://www.wmg.com/wp-content/uploads/2024/01/WMG-ESG-2023-Report.pdf.

[56] Miko Marfori, "Declaration of AI Training Opt Out," Sony Music Entertainment, May 16, 2024, https://www.sonymusic.com/sonymusic/declaration-of-ai-training-opt-out/.

Merlin released a similar policy in December 2024, which states that 'specific and express license, in advance' must be secured to use any of their copyrighted material for algorithm training.[57] Universal Music Group (UMG) has recently partnered with AI company, Klay Vision, to help train generated AI models with UMG-licensed material, with the agreement that these models are ethical and respectful of copyright.[58] UMG has not partnered with every AI company, and has requested some AI platforms to remove unauthorized use of their content in AI-generated music.[59]

Analysis

The growing presence of AI-generated music on streaming platforms impacts human artists. With the current trajectory of AI-generated music, creators will suffer losses on two fronts: 1) artists will lose revenue due to the unauthorized use of their works by Gen AI models without remuneration, and 2) the use of the technology will threaten traditional revenue streams as AI-generated songs substitute human-created music on streaming platforms. These two forms of harm- using human creative work as training data and replacement of human-made tracks—present different challenges, both of which threaten artists' creative control and economic viability. This section analyzes how these dynamics reshape the music industry's revenue model, redefine the role of artists and the value of their creative works, shift cultural expectations around authenticity, and expose the limitations of existing copyright enforcement mechanisms.

This change is indicative of a broader trend in creative endeavors. Artists may increasingly serve as curators, choosing AI-generated compositions, editing outputs, or working with AI systems to create new music, rather than just writing and performing.[60] Such a transition challenges long-standing ideas about artistic originality and authorship. While it's tempting to view this as a natural evolution—where those who master AI tools become the next generation of artists—this perspective overlooks how it shifts creative power away from individuals toward those with access to technical resources. It risks privileging those who can afford these services over emotional resonance or cultural authenticity, potentially narrowing the diversity of voices in music.

Economic Redistribution and the Changing Revenue Model

The increase in the presence of AI-generated music on streaming platforms has shifted the traditional revenue distribution model, directly affecting artists, labels, listeners, and streaming services. Spotify uses a pro-rata model to compensate music creators, where total royalties are pooled and distributed amongst contributors based on total streams.[61] With the advent of Gen-AI, these human-made tracks must now compete with algorithmically-generated tracks for user

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[57] "Policy on AI," Merlin November 5, 2024, https://merlinnetwork.org/policy-on-ai/.

[58] Emilia David, "Universal Strikes AI Data Training Deal, Still Suing AI Companies for Using Its Data," VentureBeat, October 29, 2024, https://venturebeat.com/ai/universal-strikes-ai-data-training-deal-still-suing-ai-companies-for-using-its-data/.

[59] Ben Lovejoy, "AI-Generated Songs on Apple Music and Spotify Breach Copyright," 9to5Mac, April 12, 2023, https://9to5mac.com/2023/04/12/ai-generated-songs/.

[60] Andrew Dempsey, "Music Industry Transformation: The Impact of AI," LinkedIn Pulse, June 2024, https://www.linkedin.com/pulse/music-industry-transformation-impact-ai-andrew-dempsey-nucne/.

[61] "Understanding Streaming Royalties: Pro-Rata Model," Random Sounds Blog, November 17, 2023, https://www.sounds.co/en/post/royalties-streaming-pro-rata-model.

streams, eating into artists' revenue. This contest for streams may be exacerbated because streaming platforms are alleged to inflate user exposure to AI-tracks in their algorithms.[62]

AI-generated tracks most often do not pay human artists for creating the music the program was trained on.[63] Therefore, AI tracks are far more cost-effective for platforms to stream because they do not require royalty payments, conventional license agreements, or complex contractual negotiations, in contrast to human material. Platforms stand to save considerable amounts of money by promoting AI-tracks, and as such, are alleged to increasingly be populating playlists with AI-generated music.[64] This combination of natural competition for streams, alongside an increasing number of AI tracks, is projected to reduce musicians' revenue by 24% by 2028.[65]

Recommendations

Changes to copyright law:

As AI continues to evolve, the legal framework governing copyright must adapt to promote fair compensation for creators while fostering innovation. To address the unauthorized use of copyrighted material in AI training datasets, Congress should:[66:]

- Amend Section 106 of the U.S. Copyright Act to explicitly address the need for authorization for AI training.[67] The new clause should state: *"The owner of copyright under this title has the exclusive right to authorize or prohibit the reproduction of their work, including but not limited to its use in training artificial intelligence models or machine learning systems."*
    - This language would shift the current opt-out model to an opt-in model for AI training datasets. Under this approach, AI developers would need explicit permission from rights holders before using their copyrighted material, ensuring fair compensation and control.
    - To facilitate enforcement, a public registry should be created where AI developers must disclose the copyrighted materials they use. This registry would be maintained by the U.S. Copyright Office and function similarly to existing mechanical licensing systems in the music industry. This would make this process easier by letting creators register their work, set licensing terms, and receive royalties without having to track every AI company individually. It would also give creators a method to check if their work has been used and challenge unauthorized use.

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[62] Virginie Berger, "AI's Impact on Music in 2025: Licensing, Creativity, and Industry Survival," *Forbes*, December 30, 2024, https://www.forbes.com/sites/virginieberger/2024/12/30/ais-impact-on-music-in-2025-licensing-creativity-and-industry-survival.

[63] Unchained Music, "Navigating the Legal Implications of AI-Generated Music & Copyright," Unchained Music, July 14, 2023, https://www.unchainedmusic.io/blog-posts/navigating-the-legal-implications-of-ai-generated-music-copyright

[64] Berger, "AI's Impact on Music."

[65] Berger, "AI's Impact on Music."

[66] *Copyright Law of the United States,* U.S. Code 17, https://www.copyright.gov/title17/.

[67] Cala Coffman, "Is the Use of Copyrighted Works to Train AI Qualified as a Fair Use," *Copyright Alliance*, April 11, 2023, https://copyrightalliance.org/copyrighted-works-training-ai-fair-use/.

- Establish a compulsory licensing scheme under a new subsection of Section 115, similar to the system currently in place for cover songs.[68] The new subsection could state: *"Any entity that wishes to use copyrighted works in the training of artificial intelligence models may do so only under a compulsory license issued by the Copyright Office. Such a license shall require payment of a standardized royalty fee to the rights holders, with rates set by the Copyright Royalty Board."*

Ensuring transparency of data sources:
To encourage adequate compensation of human artists and foster trust in AI models, industry should study the following mechanisms:

- Model cards can also be implemented to identify when and how AI models are using copyrighted material. Model cards are brief informative documents that accompany AI models, disclosing the context in which models are intended to be used.[69] With this method, artists, labels, advocates, and regulators can be informed when and how music is being used for training purposes, which can enable fair compensation for musicians.
- An AI "trustmark" or "nutrition" label should also be studied. An example of this can be seen in AI:OK, an initiative that promotes ethical use of AI in the music industry. It plans to release a "trustmark" to indicate that the music receiving the mark was created responsibly in the context of AI use. The criteria for issuing the trust mark will be determined by a stakeholder forum, and those criteria should include the use of content for training data when the artist has provided consent.[70]

Establishing a Digital Watermarking Standard:
Government agencies should develop industry standards for digital watermarking of AI-generated content, enabling the tracking and identification of copyrighted material.[71] To implement this system, we propose the following.

- For artists to have greater IP protection over their music, there should be a consistent industry standard for digital watermarking of AI-generated content to prevent illegal use of copyrighted and protected work.[72] By integrating digital watermarking technology, copyrighted material can be properly identified. This digital watermarking technology

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[68] Thomas Carey, "Examining the Possibility of Compulsory Copyright Licensing for LLM Training," IPWatchdog, February 25, 2024, https://ipwatchdog.com/2024/02/25/examining-possibility-compulsory-copyright-licensing-llm-training/id%3D173705/.

[69] Mitchell, Margaret, Simone Wu, Andrew Zaldivar, Parker Barnes, Lucy Vasserman, Ben Hutchinson, Elena Spitzer, Inioluwa Deborah Raji, and Timnit Gebru. "Model Cards for Model Reporting." FAT* '19: Conference on Fairness, Accountability, and Transparency, January 29--31, 2019, Atlanta, GA, USA, January 9, 2019, 220–29. https://doi.org/10.1145/3287560.3287596

[70] Cooper, Gael. 2024. "A New 'Trustmark' Could Show Music Uses AI Responsibly." CNET, June 27, 2024. https://www.cnet.com/tech/services-and-software/a-new-trustmark-could-show-music-uses-ai-responsibly/

[71] Knibbs, Kate. "A New Group Is Trying to Make AI Data Licensing Ethical," *WIRED*, September 4, 2024, https://www.wired.com/story/dataset-providers-alliance-ethical-generative-ai-licensing/.

[72] Baisuni, Hasan, Djulaeka Djulaeka, and None Mohammad Ali Sajjad. 2024. "Legal Protection for Unauthorized Copying of Songs on Digital Platforms Through Audio Watermarking Method." JUSTISI 10 (3): 547–64. https://doi.org/10.33506/js.v10i3.3291

should be implemented by AI music generation platforms, as they are the entities that use copyrighted works to train AI models.

- Additionally, streaming platforms such as Spotify and Apple Music should update their service agreements and terms of contract to detail how they will distribute royalties to AI-generated music that contains digitally watermarked music. The guidelines of this new royalty system should receive input and feedback from artists and representatives of record labels. This will ensure that the rules allow for fair compensation of artists' music.

Anticompetitive Practices

Executive Summary

Streaming platforms have a unique technological advantage over other traditional forms of music distribution, like records, CDs, and radio, because they collect, analyze, and sell user data and can use the data to shape recommendation algorithms and sell ads. That, coupled with weak labor protections for artists, creates barriers for competitor streaming platforms or artists to provide alternative options for listeners to discover new artists and musicians and to be adequately compensated for their work. The advent of AI-generated music will likely exacerbate these dynamics.

Due to this music streaming platform concentration, artists face growing concerns, including:

1. Market concentration through acquisitions of potential competitors,
2. Impact of platform information gathering and sharing to increase market share,
3. Artists' inability to collectively bargain and negotiate fair terms for product use and compensation, and
4. A lack of transparency on how payments and commercial relationships influence the distribution of music via streaming platform algorithms.

In response, we recommend:

1. The Department of Justice (DOJ) and Federal Trade Commission (FTC) assess the extent to which further mergers and acquisitions in music streaming may harm competition,
2. The U.S. Congress pass the Protect Working Musicians Act with additional requirements around AI transparency, and
3. Industry groups establish best practices for transparency of payment models.

Background

Since 2017, music streaming has been the most popular distribution mechanism in the music industry, accounting for a larger portion of total revenue than CD sales or digital copies of music.[73] By 2023, streaming accounted for 84% of all U.S. recorded music revenue.[74] However, artists may receive as little as 12% of this total revenue.[75] Most major platforms, including Spotify and Apple Music, use a pro-rata system of royalty distribution in which all of the revenue collected from subscribers or ads from a given period goes into a single pot that is divided by the total number of streams.[76] Therefore, when platforms recommend AI-generated music to listeners, it can reduce the percentage of revenue for human artists.

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[73] RIAA, "U.S. Music Revenue Database," RIAA, July 12, 2023, https://www.riaa.com/u-s-sales-database/.

[74] Matthew Bass, "Year-End 2023 RIAA Revenue Statistics," RIAA, 2024, https://www.riaa.com/wp-content/uploads/2024/03/2023-Year-End-Revenue-Statistics.pdf, 1.

[75] Amy X. Wang, "Music Artists Only Got 12 Percent of $43 Billion Made by Industry in 2017: Study," *Rolling Stone*, August 7, 2018, https://www.rollingstone.com/pro/news/music-artists-make-12-percent-from-music-sales-706746/.

[76] Ben Sisario, "Musicians Say Streaming Doesn't Pay. Can the Industry Change?" New York Times, May 7, 2021, https://www.nytimes.com/2021/05/07/arts/music/streaming-music-payments.html

Market Concentration through Acquisitions

In 2024, just four companies control most of the market. Spotify, Apple Music, Amazon Music, and YouTube Music together account for 97.3% of music streaming in the U.S.[77]

In recent decades, the music streaming industry has consolidated partially through major acquisitions. In 2014, Apple announced its acquisition of Beats Music, a subscription-based platform founded by Jimmy Iovine and Dr. Dre, which emphasized a highly personalized music experience.[78] Additionally, in 2019, the broadcasting corporation SiriusXM acquired Pandora in an all-stock transaction valued at $3.5 billion,[79] after which SiriusXM became the world's largest audio entertainment company.[80] In 2016, discussions arose regarding Spotify's potential acquisition of SoundCloud, a platform that enables users to upload and share their own music without the need for a publisher.[81] However, Spotify ultimately decided not to complete the acquisition due to concerns regarding its potential impact on the company's initial public offering (IPO).[82]

Spotify has also pursued strategic acquisitions to expand its offerings in other sectors beyond just streaming platforms. For instance, Spotify has made substantial investments in the podcast industry, acquiring production entities such as Gimlet, Parcast, and The Ringer, as well as podcast monetization entities like Megaphone.[83] Furthermore, Spotify has acquired podcast analytics firms such as Chartable and podcast advertising companies like Podsights.[84] Additionally, in 2014, Spotify acquired The Echo Nest, a Massachusetts-based music data firm, to drive its music discovery features, playlist generation, data feeds, and recommendation algorithms.[85] The Echo Nest provided Spotify with a significant amount of music metadata, which classified songs into key, tempo, time signature, acoustics, danceability, instrumentals,

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[77] Dylan Smith, "Spotify, Apple, & Amazon Top 90% U.S. Streaming Market Share," Digital Music News, July 9, 2024, https://www.digitalmusicnews.com/2024/07/05/music-streaming-market-share-us/.

[78] Apple Inc., "Apple to Acquire Beats Music & Beats Electronics," *Apple Newsroom*, May 28, 2014, https://www.apple.com/newsroom/2014/05/28Apple-to-Acquire-Beats-Music-Beats-Electronics.

[79] Sirius XM Holdings Inc., "SiriusXM to Acquire Pandora, Creating World's Largest Audio Entertainment Company," *Sirius XM Investor Relations*, September 24, 2018, https://investor.siriusxm.com/news-events/press-releases/detail/1129/siriusxm-to-acquire-pandora-creating-worlds-largest-audio.

[80] Sirius XM Holdings Inc., "SiriusXM Completes Acquisition of Pandora," *Sirius XM Investor Relations*, February 1, 2019, https://investor.siriusxm.com/news-events/press-releases/detail/1084/siriusxm-completes-acquisition-of-pandora.

[81] Todd Spangler, "Spotify in Talks to Acquire SoundCloud (Report)," *Variety*, September 28, 2016, https://variety.com/2016/digital/news/spotify-soundcloud-acquisition-report-1201873039.

[82] Natasha Lomas, "Spotify Walks Away from SoundCloud Acquisition Talks," *TechCrunch*, December 8, 2016, https://techcrunch.com/2016/12/08/spotify-soundcloud-deal-dead.

[83] Spotify Technology S.A., "About Spotify," *Spotify Investors*, accessed March 18, 2025, https://investors.spotify.com/about.

[84] *Spotify Newsroom*, "Spotify Acquires Podsights and Chartable to Advance Podcast Measurement for Advertisers and Insights for Publishers," February 16, 2022, https://newsroom.spotify.com/2022-02-16/spotify-acquires-podsights-and-chartable-to-advance-podcast-measurement-for-advertisers-and-insights-for-publishers.

[85] Laura Sydell, "Spotify Buys The Echo Nest to Boost Music Discovery," *The Guardian*, March 6, 2014, https://www.theguardian.com/technology/2014/mar/06/spotify-echo-nest-streaming-music-deal.

loudness, mode, valence, and energy.[86] This classification system enabled Spotify to develop "mood" playlists, allowing it to curate playlists based on mood while enhancing the user-personalized recommendation systems that drive its music discovery features. Ultimately, this acquisition played an integral role in realizing Spotify's current business model focused on "chill music" and contributing to its increased recent financial success.[87]

Access to popular music. Obtaining the rights to popular music of successful global artists is important for online streaming platforms. This access can serve as a choke point for the expansion of new services and a result of chilling competition. Streaming platforms obtain the rights for recorded music from labels, the largest being Universal, Sony BMG, and Warner, which account for around 67.5% of the overall global recorded music market.[88] The contracts between platforms and major labels are confidential, but may be influenced by labels' ownership interests in streaming platforms—Universal holds a 3.5% stake in Spotify, and Sony Music holds a 2.9% stake in Spotify.[89]

Impact of Personal Data Collection and Sharing on Competition

(see also next section on Privacy, pg. 26)

Similar to other modern technology platforms, data gathering and analysis provide streaming platforms with power to 1) draw in greater advertising revenue through increased numbers of users as reported to potential ad clients, and 2) influence user behavior to keep listeners on the platform longer through recommendation systems based on AI algorithms.

According to its privacy policy, Spotify collects users' listening history, skipped songs, downloads, social interactions, auditory history, emission rate, listening time, and interactions with playlist features.[90] This valuable data is used for "personalization, troubleshooting, developing new features and technology, marketing and advertising, [and] research."[91]
The UK's House of Commons Digital, Culture, Media and Sport Committee concluded that a music streaming platform's "aggregation [of] large quantities of data" creates a significant competitive advantage for that company.[92] Ultimately, these circumstances create an economy of scale, as music platforms with large user bases possess the most data, which may limit a smaller, lower-resourced company from gaining new user bases in the market.

Lack of Collective Bargaining

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[86] Liz Pelly, *Mood Machine.*

[87] See introduction.

[88] Daniel Antal, Amelia Fletcher, and Peter L. Ormosi, "Music Streaming: Is It a Level Playing Field?" *Centre for Competition Policy and Norwich Business School, University of East Anglia*, January 11, 2020, https://ueaeprints.uea.ac.uk/id/eprint/79531/1/Accepted_Manuscript.pdf.

[89] Antal, Fletcher and Ormosi, "Music streaming."

[90] Nils Aoun et al., "Discover Weekly: How the Music Platform Spotify Collects and Uses Your Data," *Montreal AI Ethics Institute*, May 26, 2022, https://montrealethics.ai/discover-weekly-how-the-music-platform-spotify-collects-and-uses-your-data/.

[91] Matt Burgess, "All the Ways Spotify Tracks You-and How to Stop It," Wired, August 7, 2021, https://www.wired.com/story/spotify-tracking-how-to-stop-it/.

[92] House of Commons, "Economics of Music Streaming," House of Commons Digital, Culture, Media and Sport Committee, July 9, 2021, https://committees.parliament.uk/publications/6739/documents/72525/default, 80.

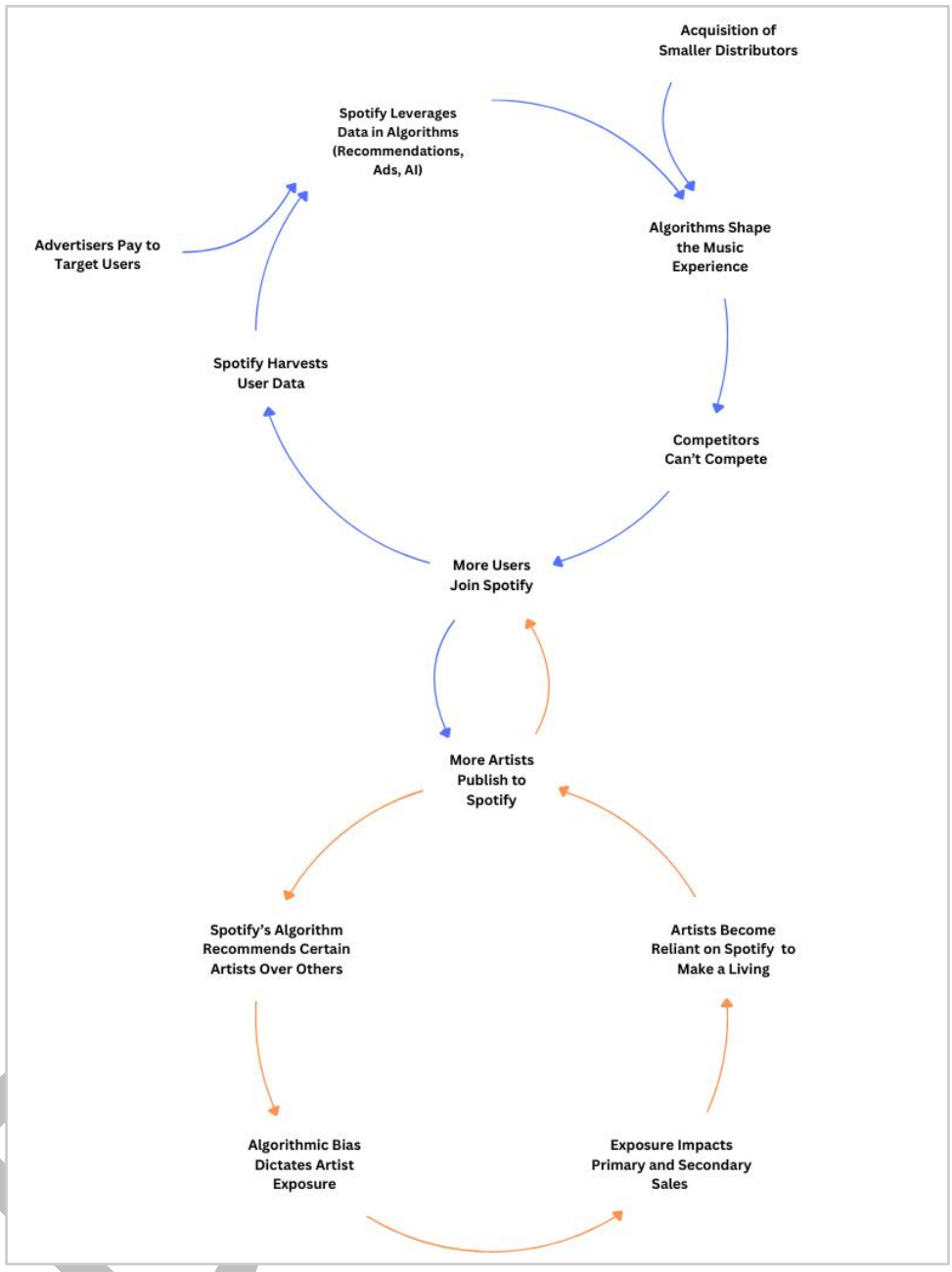
The popularity of streaming in the music industry has left artists reliant on platforms for both revenue and exposure; however, musicians' unique legal status creates barriers to negotiating effectively with these platforms.

According to a 1984 National Labor Relations Board ruling, artists are classified as independent contractors and are not protected by collective bargaining rights outlined in the National Labor Relations Act.[93] This distinguishes them from other creative artists such as actors and screenwriters, who are classified as employees rather than as independent contractors.

Without a way to negotiate with music streaming platforms, some industry experts question the degree to which artists can engage in collective action. One industry expert hypothesized that, "if these musicians worked together to collectively bargain with Spotify or threatened to pull their music to push for better rates, they would risk being sued as an illegal cartel."[94]

[93] August Brown and Kenan Draughorne, "Musicians deal with stingy streamers and AI threats too. So why aren't they on strike?" LA Times, July 26, 2023, https://www.latimes.com/entertainment-arts/music/story/2023-07-26/musicians-sag-aftra-strike-wga-actors-writers

[94] Luke Ottenhof, "Why Songwriters Can't Have Their Own Writers Strike—Yet," Pitchfork, May 23, 2023, https://pitchfork.com/thepitch/why-songwriters-cant-have-their-own-writers-strike-yet/



Streaming Platform Market Power Model (Figure 1):

Twin cycles feed one another to increase streaming platform market power. The top cycle is characterized by leveraging proprietary user data to improve the services offered, which drives increased advertiser revenue, attracts increased customers, and makes it difficult for alternative companies to compete. The bottom cycle is characterized by leveraging algorithms in business deals to influence recommendations in favor of certain artists over others, increasing the difficulty for artists to reach listeners and to increase their revenue. This significantly reduces the compensation received by musicians in comparison to other distribution methods, as artists can only receive revenue through streams after providing streaming platforms with their work prior to any compensation.

Analysis

Self-perpetuating twin cycles are created when music streaming platforms use data-driven AI algorithms. (Figure 1). Moreover, platforms utilize data from songs and users' behavior to build proprietary tools, like music recommendation algorithms. As such, music streaming platforms with access to a large amount of user data can enhance their recommendation algorithms–giving them an advantage over their competitors and smaller distributors. Extensive user data repositories provide advertisers with the necessary information to micro-target consumers through user data profiles and inferences[95] which justifies advertisers paying more for targeted advertising on those platforms, resulting in a competitive advantage in the online advertising market.[96] Streaming platforms that capitalize on personal user data and ad revenue can invest and expand further, enhancing the competitive advantage, while smaller music platforms, which do not rely on profile-based targeted advertising, increasingly struggle to compete for revenue.[97]

This process is a reinforcing feedback loop. The more data a platform receives, the more it can enhance its algorithms, leading to increased profits that help finance the acquisition of competitors. In Spotify's privacy policy, it states that "We may receive data about you from companies we acquire. This is to enhance our services, products, and offerings."[98] When two companies merge, so too does the volume of user data, starting the cycle over again and increasing consolidation in the sector.

Even in the concentration of market power, independent musicians could still improve their working conditions if they were able to collectively bargain. Combined, artists could negotiate with the large streaming services to make algorithms more transparent. For instance, following their strike in 2023, members of the Writers Guild of America were able to renegotiate their contracts to increase their pay, provide more health coverage, and protect against AI infringement.[99] Without wage transparency and the ability to negotiate directly with the distributors afforded by the National Labor Relations Act, musicians and songwriters face additional challenges in earning a livable wage.[100]

The Protect Working Musicians Act of 2023

The Protect Working Musicians Act of 2023 (PWMA) aims to give artists collective bargaining rights with dominant streaming platforms and generative AI companies.[101] Originally introduced

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[95] Reference privacy section.

[96] Spotify, "About Data Collection for Attribution," Ad Analytics Help Center, 2025, https://help.adanalytics.spotify.com/about-data-collection-for-attribution.

[97] Chal Ravens, "Good Vibrations: How Bandcamp Became the Heroes of Streaming," The Guardian, June 25, 2020, https://www.theguardian.com/music/2020/jun/25/bandcamp-music-streaming-ethan-diamond-online-royalties.

[98] *Spotify*, "Privacy Policy," 2024, https://www.spotify.com/us/legal/privacy-policy, section 3. Personal data we collect about you.

[99] Writers Guild of America, *Summary of the 2023 WGA MBA*, accessed April 2, 2025, https://www.wga.org/contracts/contracts/mba/summary-of-the-2023-wga-mba.

[100] Anike Tella-Martins, *"Should Musicians Unionize to Respond to Streaming Inequity?" Brooklyn Law School Sports & Entertainment Law Blog*, February 5, 2024, accessed April 2, 2025, https://sports-entertainment.brooklaw.edu/music/should-musicians-unionize-to-respond-to-streaming-inequity/.

[101] H.R. 5576, 118th Cong. § Goal (2023).

in 2021, the bill was reintroduced in 2023 by Rep. Deborah Ross (D-NC) and co-sponsored by three other House Democrats.[102] [103]

The PWMA acknowledges that under the Digital Millennium Copyright Act, platforms have little incentive to restrict unlicensed music–placing the responsibility on the artist to identify each violation.[104] This notice-and-takedown system has been described as a "'gigabit-speed game of whack-a-mole.'"[105] This places the responsibility on artists to monitor for unauthorized use of their work, a challenge that will likely increase as AI automates the distribution of AI-generated music, and there is a lack of transparency on which human-created music is used to create specific AI-generated music.

The bill also recognizes that the growing power imbalance between artists and music streaming platforms is a threat to the fair licensing markets that are essential to a "healthy music ecosystem."[106] This is because small artists will experience a larger financial burden when they stop using music platforms, than the platform itself[107] According to Rep. Ross, the PWMA "will help give small, independent music creators a level playing field, empowering them to stand together for fairer compensation and giving them a voice in important negotiations that will determine the future of the music industry."[108] Olivia Finlayson argues that enacting the PWMA would help accomplish one of the goals of the U.S. Constitution, of providing economic incentives to encourage the arts and sciences.[109] Finlayson writes, "If fewer musicians are incentivized to create and commercialize musical works, whether they are beginning their careers or are already an Independent Music Creator, then the public loses out on a more diverse, creative, innovative, and competitive music industry, as well as the opportunity to discover great talent."[110] Given music's integral role in free expression and public policy debate, the resulting less diverse environment has the potential to decrease democratic engagement.

Further investigation is necessary on the degree to which the PWMA would mitigate the impact of market concentration and distribution of AI-generated music over online streaming platforms. Stakeholder convenings should provide input on whether the PWMA's definition of "Dominant

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[102] Steven Cohen (D-TN0, James McGovern (D-MA), and Daniel Goldman (D-NY)

[103] Sammi Dietrich, "The Protect Working Musicians Act of 2023 Explained," *Entertainment Law Review* (Loyola Marymount University), November 1, 2023, https://entertainmentlawreview.lls.edu/the-protect-working-musicians-act-of-2023-explained/.

[104] H.R. 5576, 118th Cong. § 2 (5) (2023).

[105] H.R. 5576, 118th Cong. § 2 (5) (2023).

[106] H.R. 5576, 118th Cong. § 2 (1) (2023).

[107] Dietrich, "The Protect Working Musicians Act of 2023 Explained."

[108] Chris Cooke, "Federal Lawmaker Introduces Revamped Protect Working Musicians Act, Proposing Indie Collective Negotiation Rights for Streaming and Generative AI," *Complete Music Update* (September 20, 2023), U.S. Representative Deborah Ross (September 2023), https://ross.house.gov/2023/9/federal-lawmaker-introduces-revamped-protect-working-musicians-act-proposing-indie-collective-negotiation-rights-for-streaming-and-generative-ai.

[109] Olivia Finlayson, "Why the Protect Working Musicians Act's Proposed Antitrust Exemption Needs to Be Enacted," Loyola of Los Angeles Entertainment Law Review 44, no. 3 (2024): 129-162.

[110] Olivia Finlayson, "Why the Protect Working Musicians Act's Proposed Antitrust Exemption Needs to Be Enacted," Loyola of Los Angeles Entertainment Law Review 44, no. 3 (2024): 153.

Online Music Distribution Platforms" provides a broad enough scope to cover the necessary entities that will distribute AI-generated music.

Advocacy groups have supported the bill, including the American Association of Independent Music, the Artists Rights Alliance, Society of Composers and Lyricists, Songwriters Guild of America, and Music Creators North America. However, the PWMA has not seen movement in Congress since its introduction in September 2023.[111] The bill was referred to the House Committee on the Judiciary on the same day it was introduced, and there has been no action since. Without adding Republican co-sponsorship, the bill is unlikely to move forward, particularly in a divided Congress where cross-party backing is often necessary for legislative success.

Further, music advocacy groups have shown support and could be leaders in lobbying Congress.[112] For instance, the American Association of Independent Music (A2IM) collaborated in crafting the updated bill, emphasizing the need to "level the playing field" for artists in the digital age and the world of AI-generated music.

Recommendations

DOJ & FTC should analyze music industry acquisitions and ask whether they are anticompetitive.

The U.S. Department of Justice (DOJ) and the Federal Trade Commission (FTC) should conduct a specific analysis to determine whether acquisitions and market practices of major streaming platforms have had an anticompetitive effect.

Such an investigation should involve an analysis of whether mergers and acquisitions within the streaming industry have created market concentration that inhibits competition. The DOJ and FTC should also investigate whether exclusive music distribution agreements with streaming platforms prevent independent artists from accessing fair opportunities for exposure and compensation.[113]

Additionally, the DOJ and FTC should also investigate whether recommendation algorithms trained on personal data obtained through market concentration disproportionately favor bigger artists with existing popularity, effectively marginalizing independent musicians and less popular genres that get less visibility, and reducing overall competition.

The U.S. Congress should pass the Protect Working Musicians Act.

Congress should act to specifically grant musicians the ability to collectively bargain with large music streaming platforms by passing the Protect Working Musicians Act of 2023 (H.R. 5576). The bill aims to empower independent music creators, who, under current antitrust laws, cannot band together to seek fair compensation for their work. The proposed act seeks to level the

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[111] Cooke, "Federal Lawmaker."

[112] H.R. 5576, 118th Cong.(2023).

[113] Rebecca Salganik, Fernando Diaz, and Golnoosh Farnadi, "Fairness Through Domain Awareness: Mitigating Popularity Bias for Music Discovery" (Cornell University, August 28, 2023), https://doi.org/10.48550/arXiv.2308.14601.

playing field, enabling these creators to secure equitable licensing agreements without the fear of violating antitrust regulations.

During the discussion of the bill, Congress should consider adding a provision to provide musicians access to wage information currently obscured by streaming platform non-disclosure agreements.[114] Without transparency, musicians cannot negotiate fair wages. Regulatory measures should ensure that NDAs do not prevent access to vital earnings data, thereby allowing artists to make informed decisions in negotiations.

Industry associations should collaborate on and publicize best practices on the transparency of payment models.

To address transparency issues in artist compensation, in addition to adding a provision to the PWMA, the music industry should develop and enforce a policy that streaming platforms should provide detailed, publicly available information on their formulas for distributing revenue to artists.

[114] "Non-Disclosure and Confidentiality Agreements in the Entertainment Industry 101," Wagner Legal PC, accessed March 26, 2025, https://www.wagnerlegalpc.com/blog/non-disclosure-and-confidentiality-agreements.

Privacy & Personal Data Use

Executive Summary

As noted above, one method by which streaming platforms gain a competitive advantage in the distribution of music is the monetization of personal data. Streaming platforms use personal data to make inferences about their listeners, which can be useful to deliver targeted profile-based advertising on the platform and to obtain value from third parties who would like to use those inferences to sell products or services to the listeners. User inferences may also be useful for actions that may not directly benefit the listener, such as psychological profiling or to increase the effectiveness of online scams and fraud. As AI and other analytic capabilities increase a platform's ability to draw more insightful inferences, listeners' personal data will become an increasingly significant asset.

Review of Spotify's privacy policy demonstrates there is a need for increased specificity in the transparency of three areas:

- the types and sources of personal data collection
- sharing practices with third parties
- how inferences from collected data are used to monetize the platform

Background

Spotify's privacy policy outlines how the platform collects and processes the personal data of both listeners and musicians. While much of the policy's focus is often on listener data, Spotify also gathers significant information about musicians. This includes metrics such as streaming numbers, listener demographics, and engagement patterns.[115] The collection and use of musicians' personal data may be particularly relevant to Spotify's market position, as it could allow the company to strengthen its bargaining power in negotiations with artists and rights holders. Prior research has noted that access to this type of data can shape contractual relationships between streaming platforms and musicians, potentially reinforcing Spotify's influence over artist visibility and revenue distribution.[116]

Structure and Language of the Privacy Policy

Spotify's privacy policy consists of 12 major sections, which include descriptions of the scope of the policy, personal data rights and controls, the data collected about each individual, and the purposes for which the platform collects that data.[117] Some sections of the privacy policy use non-exhaustive and non-inclusive language to allow for greater flexibility in the collection and use of personal data. For instance, in the description of how Spotify uses personal data, it states "examples include [...] your actions with the Spotify service, such as search queries, streaming history," among others.[118] When describing the third-party applications that Spotify receives data

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[115] Tift Merritt (artist), discussion with author regarding data collected using Spotify for Artists, March, 2025.

[116] J. W. Morris and D. Powers, "Control, Curation, and Musical Experience in Streaming Music Services," *Creative Industries Journal* 8, no. 2 (2015): 106-122, https://www.academia.edu/17611824/Control_Curation_and_Musical_Experience_in_Streaming_Music_Services.

[117] *Spotify*, "Privacy Policy."

[118] *Spotify*, "Privacy Policy," section 3. Personal data we collect about you.

from, the policy states, "these third-party apps, services, or devices, may include: social media, devices including: audio, smart watches [...]", and others.[119]

Types and Sources of Personal Data Collection

Types of Data Collected. According to Spotify's privacy policy for U.S. residents, the company collects personal data from both its users and third-party sources.[120] It collects demographic data provided during the account creation process (such as users' names, contact information, age, street address, and institutional affiliation), payment data to process subscriptions (such as the type of payment method or card details), and several types of technical and device identifiers (such as IP addresses, device IDs, browser details, etc.).

Spotify's privacy policy includes a section on Spotify's collection of "usage data," a broad term to capture a wide variety of personal data types about users' interactions with Spotify's services (e.g., users' search queries, song library and playlists, streaming and browsing history, interactions with other users, device sensor capabilities, etc.). This also includes inferences of users' interests, behaviors, and preferences based on their usage of its services. For instance, device sensor data may be used to infer if a user is running or driving.[121] Spotify uses this usage data in combination with other personal data types for a variety of purposes, including personalized playlists and music recommendations, targeted advertising and marketing (including by third parties that receive personal data from Spotify), and the popular "Spotify Wrapped" feature.[122]

Data From Third-Party Sources. Beyond this direct data collection, the policy also details Spotify's data collection from third-party sources.[123] These include companies acquired by Spotify; social media platforms (e.g., when users link their social media accounts with Spotify); third-party smart device and app providers (e.g., when users link their Spotify accounts with their speakers, cars, smartwatches, or voice assistants); technical and security providers (e.g., for geo-locking and account protection); and third-party payment processors or merchants (e.g., when users pay through telecom companies or get directed from Spotify's app to third-party merchants' websites). The policy also mentions that Spotify receives inferences from 'certain' advertising or marketing partners to deliver more relevant ads and marketing, but does not specify or further explain who these partners are.

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[119] *Spotify*, "Privacy Policy," section 3. Personal data we collect about you.

[120] *Spotify*, "Privacy Policy."

[121] Wessel Joosten, "The Hidden Cost of Convenience: Unveiling Spotify's Data Practices for Privacy Implications," *Diggit Magazine*, October 14, 2024, https://www.diggitmagazine.com/articles/hidden-cost-convenience-unveiling-spotifys-data-practices-privacy-implications.

[122] Brendan Kearns, "Spotify: What Personal Data Does It Collect on You?" *CHOICE*, May 8, 2024, https://www.choice.com.au/consumers-and-data/data-collection-and-use/who-has-your-data/articles/spotify-personal-data.

[123] *Spotify*, "Privacy Policy."

Sharing Practices with Third Parties

Spotify's privacy policy demonstrates that the company retains the ability to transfer personal data to a wide range of third parties. Under section "4. Our purpose for using your personal data," Spotify states that personal information can be shared to "fulfill contractual obligations with third parties."[124] For example, they may provide data about user listening due to "an agreement with a Spotify rightsholder."[125] Further, in section "5. Disclosing your personal data," Spotify lists the categories of entities it may share user data with, including to "law enforcement and other authorities, or other parties to litigation."[126] Spotify can disclose that information if it "believe[s] in good faith it's necessary for us to do so, for example [...] for our own or a third party's justifiable interest, relating to: [...] litigation."[127] Moreover, throughout Spotify's privacy policy, there is no definition for the privacy obligations that must be implemented by entities Spotify shares data with, nor a specific definition for the entities listed.

Personal Data and Inferences for Monetization

Spotify notes that personal information is "pseudonymized" when shared with third parties, meaning that data is "identified by a code rather than your name or other directly identifying information." Essentially, an individual's information may not be tied to their specific name, but is still tied to a code that relates to a single individual, which creates a risk that the data could be combined with other information to re-identify the individual. A study analyzing 750 users and over 400,000 songs revealed that music taste can predict 1) gender with 71.7% accuracy, 2) drinking habits with 62.8% accuracy, and 3) smoking habits with 60.2% accuracy.[128] When you register yourself as a Spotify user and create a new account, Spotify asks for your email, gender, date of birth, and country/region. However, upon receiving personal data, Spotify creates inferences from the data, including various interests, including diet (eg. vegetarian or vegan), relationship status (eg. dating), and career aspirations (eg. sound production).[129] They also try to infer the roles/positions you are in as well as data about your sexuality.[130]

Companies increase the effectiveness of personalization by supplementing data they collect directly with information they obtain from third parties. Spotify includes a description of the types of third parties from which it obtains additional personal data. The policy calls out the categories of:

- authentication partners

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[124] *Spotify*, "Privacy Policy," section 4. Our purpose for using your personal data.

[125] *Spotify*, "Privacy Policy," section 4. Our purpose for using your personal data.

[126] *Spotify*, "Privacy Policy," section 5. Disclosing your personal data.

[127] *Spotify*, "Privacy Policy," section 5. Disclosing your personal data.

[128] Jiancheng Ye, *User Privacy on Spotify: Predicting Personal Data from Music Preferences* (Master's thesis, University of Padova, 2022), https://thesis.unipd.it/retrieve/7f6feb2c-3606-43d4-a88c-014b44222393/Thesis_Jiancheng_Ye_pdfa.pdf.

[129] Sam Dillon, "Sam Inferences," February 14, 2025, https://drive.google.com/file/d/17dTWTUwFT9ibybiKbvk8Srwq5bI_44oc/view?usp=sharing.

[130] Isa Notermans, "Say Hi to the Spotify Diversity Data," *Spotify HR Blog*, July 9, 2018, https://hrblog.spotify.com/2018/07/09/say-hi-to-the-spotify-diversity-data.

- third-party applications, services and devices you connect to your Spotify account
- technical service partners
- payment partners and merchants
- advertising and marketing partners
- acquired companies[131]

The inclusion of advertising and marketing partners is potentially particularly significant as it is worded broadly enough to allow for Spotify to obtain any information or inference from a data broker.

Use of Data for Advertising and Personalization. According to section 5 of Spotify's privacy policy, the company uses personal data to "provide personalized ads and marketing communications," based on users' interests and activity on the platform.[132] Spotify also discloses that it shares certain user data with advertising partners and third-party advertising networks.[133] Specifically, they mention sharing identifiers such as cookies and device IDs to measure ad effectiveness and to help deliver ads on both Spotify and third-party platforms.

Spotify does permit users to disable tailored ads in its privacy settings. To do this, the user must opt out of tailored ads by turning off "Tailored Ads" in the settings (Account > Account Privacy > Security and Privacy > Tailored Ads).[134] Upon opting out, inferences will not be made of the user: instead, the inferences log says the name of the user's internet provider (eg., T-Mobile), followed by "[Advertiser-Restricted]."[135] However, the sharing of user data with third parties means that user profiles can potentially be used to serve ads outside of Spotify, on other services and websites participating in advertising networks.

Analysis

Spotify collects data from both internal mechanisms on the platform and through third parties. The ambiguous language used allows Spotify to collect and share user data without disclosing names of entities or third parties. Non-exhaustive language in the privacy policy, such as "may include" when describing which third parties receive user data, provides flexibility for the platform, but also impedes transparency and an understanding by listeners and musicians on how data that relates to them may be used. Without a proper understanding of the entities and the rules governing platforms' data sharing practices with third parties, listeners cannot make informed decisions about using Spotify or other music platforms.

When Spotify combines internal and inferred user data, such as demographic information, device details, listening habits, and interactions with the app with data, with data from third parties or other acquired platforms, it can create unique and personalized profiles to sell to third-party advertisers. Data profiling that reveals vulnerable inferences about a user, such as smoking or

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[131] *Spotify*, "Privacy Policy," section 3. Personal data we collect about you.

[132] *Spotify*, "Privacy Policy," section 5. Disclosing your personal data.

[133] *Spotify*, "Privacy Policy."

[134] *Spotify*, "Web Player: Music for Everyone," accessed March 6, 2025, https://open.spotify.com.

[135] Kristina Wong, "Kristina Inferences," February 16, 2025, https://drive.google.com/file/d/1AOsAPjg_C96H-7n6raolqN2xyUCKe5mh/view?usp=sharing.

alcohol use, sexuality, relationship status, and mental health conditions, may put users at risk for targeted advertisements that may be predatory or harmful.[136]

Additionally, third parties may choose to use AI or advanced analytics to further infer sensitive observations for targeted advertising. Spotify's privacy controls only allow users to opt out of tailored ads on the platforms—not out of third-party data sharing. This creates a significant risk for the user.

Although Spotify asserts that personal information is pseudonymized when shared with third parties like advertisers, the data remains linkable to individuals, which poses concerns about the potential for re-identification. Third parties may combine pseudonymized data with other data points to re-identify individuals based on patterns and correlations, making pseudonymization ineffective as a method to protect privacy. Studies have revealed that even datasets whose pseudonymization complies with HIPAA Safe Harbor Data standards are susceptible to group re-identification rates of 50% when combined with exogenous information.[137] This means that 1 in 2 Spotify users' data may be susceptible to reidentification. Further, the risk of re-identification increases as more data is recorded in the pseudonymized dataset.

Recommendations

The music streaming industry could coordinate best practices to recommend with more specificity how data will be collected, used, and transferred to third parties. Privacy best practices should be developed through convenings with stakeholders. Organizations such as the Future of Privacy Forum or the Center for Democracy and Technology could serve as conveners. That process should include consumer advocates, academics, musicians, platforms, advertisers, labels, and regulators.

Those best practices should include:

The extent to which user data should be shared with 3rd party entities and what obligations music streaming platforms should place on those organizations.
For example, industry best practices might recommend that music streaming platforms disclose the more specific categories or the names of third parties with access to user data. Furthermore, they might recommend restricting the usage of data, such as secondary uses and the onward transfer of the data, beyond what is transparent to the user. They should also stipulate the need to prevent reidentification in pseudonymized data. These practices might be part of a larger annual review recommendation where platforms evaluate and review their third-party data sharing practices.

What inferences should be created from listener and musician data, and the degree to which sensitive inferences should be restricted from use and transfer to third parties.

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[136] Electronic Privacy Information Center, "Online Advertising & Tracking," *EPIC*, accessed April 8, 2025, https://epic.org/issues/consumer-privacy/online-advertising-and-tracking/.

[137] Latanya Sweeney et al., "Re-Identification Risks in HIPAA Safe Harbor Data: A Study of Data from One Environmental Health Study," *Technology Science* (2017), PMID: 30687852, https://pubmed.ncbi.nlm.nih.gov/30687852/.

Predatory marketing, such as sports betting targeted at gambling addicts or pseudo-alternative medicine toward those with serious illnesses, should be addressed by the best practices. Industry best practices might create a non-exhaustive list of predatory or sensitive inferences that should be restricted from the use and transfer to third parties.

What access, correction, and deletion rights individuals should have to exercise control over their listening history and inferences drawn from their interaction with the streaming platforms.

Individual Participation is one of the fair information practice principles included in the 1980 OECD Guidelines, which have served as the framework for most privacy laws around the world.[138] Access, correction, and deletion rights are core concepts that can enable Individual Participation. The degree to which individuals should have access is often context-dependent and varies between industries. This context dependence makes the topic an important focus area for industry best practices.

Upon introducing these best practices, the industry should explore enforcement mechanisms to promote these best practices, akin to the elective content ratings systems of the motion picture and video games industries.

[138] Center for Democracy and Technology, "Privacy Basics: The OECD Guidelines," November 30, 2008, https://cdt.org/insights/privacy-basics-the-oecd-guidelines/.

Protection of Children

Executive Summary

Since the late 1990s, the protection of children's data online has been a specific focus in privacy law and regulation.[139] Lyrics, themes, visuals, and connotations can influence listeners physically and psychologically, and they can be especially damaging to children.[140] The use of AI and the ability to use personal data for content recommendations has the potential to be more harmful to children as they are more easily influenced and manipulated in developmental stages.[141] As music streaming platforms are increasingly relying on AI to recommend content to users, there needs to be additional evaluation, attention, and safeguards for protecting children on music streaming platforms.

Music streaming platforms should implement specific accountability policies, processes, and procedures to mitigate these risks to children. There are currently four specific child protection issues streaming platforms should address:

1. Narrow definitions of harmful content
2. Insufficient flagging mechanisms
3. Lack of transparency about and access to parental controls
4. Inappropriate use of children's data for profiling and advertising

To protect children from inappropriate content, we recommend the following:

1. The RIAA should update its PAL Mark program for the use of AI and target profiling of children
2. The music industry should create a third-party review system for content moderation and flagging
3. The music industry should develop best practices for streaming platform implementation of child safety features for use by parents.

Background

Exposure to inappropriate, explicit, or violent media can harm children. In a study by the American Psychological Association, an experimental group of 500 college students listened to songs with violent lyrics, such as "Shoot 'Em Up" by Cypress Hill and "Hit 'Em Hard" by Run DMC, while a control group listened to nonviolent songs.[142] Afterwards, participants performed word-association tasks to test whether they attributed non-aggressive words to aggression, or filled in incomplete words with vowels to form aggressive words. Participants then reported their feelings by ranking sentences using the State Hostility Scale after listening to the songs. Using

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[139] https://www.ftc.gov/business-guidance/resources/complying-coppa-frequently-asked-questions

[140] A. Palmer, "Violent Song Lyrics May Lead to Violent Behavior," *Monitor on Psychology*, American Psychological Association, August 2003, https://www.apa.org/monitor/julaug03/violent.

[141] UNICEF, "Generative AI: Risks and Opportunities for Children," Innocenti Global Office of Research and Foresight, 2025, https://www.unicef.org/innocenti/generative-ai-risks-and-opportunities-children.

[142] A. Palmer, "Violent Song Lyrics."

the results, researchers found a relationship between violent song lyrics and an increase in aggressive thoughts.[143]

Violent lyrics are just one example of the many types of harmful content present on music streaming platforms. Songs including references to profane language, sex, drugs, alcohol, racism, and misogyny all have the potential to harm children. Common Sense Media calls out many of these topics in the ratings system it uses for movies, video games, and apps.[144] The Common Sense Media system for movies provides five categories for potentially negative content (1. Violence and scariness, 2. Language, 3. Sex, romance and nudity, 4. Products and purchases, and 5. Drinking, drugs and smoking) and three categories of positive content (1. Positive messages, 2. Positive role models, and 3. Diverse representations).[145]

Parental Advisory Label (PAL)

In 1987, the Recording Industry Association of America (RIAA) created the Parental Advisory Label (PAL), an opt-in process where uniform guidelines are provided to dictate the age-appropriateness of a piece of content. The RIAA requires that all digital platforms "clearly and conspicuously communicate" the presence of PAL content and recommends that these platforms adopt a parental control mechanism "designed to aid parents in controlling the distribution of PAL content"[146]

The RIAA owns the trademark for the PAL Mark and oversees the standards that apply to its usage.[147] The RIAA website states "(t)he Parental Advisory label is a notice to consumers that recordings identified by this mark may contain strong language or depictions of violence, sex, or substance abuse. Parental discretion is advised."[148] Use of the PAL Mark is voluntary for RIAA member labels and online streaming platforms.[149]

The RIAA offers criteria for when organizations should use the PAL Mark:

1. Contemporary cultural morals and standards should be used in determining whether parents or guardians would find the sound recording suitable for children;
2. The context in which the material is used, as some words, phrases, sounds, or descriptions might be offensive to parents if spotlighted or emphasized, but might not offend if merely part of the background or a minimal part of the lyrics;
3. The context of the artist performing the material, as well as the expectations of the artist's audience;
4. That lyrics are often susceptible to varying interpretations, and that words can have

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[143] A. Palmer, "Violent Song Lyrics."

[144] *Common Sense Media*, accessed March, 2025, https://www.commonsensemedia.org.

[145] *Common Sense Media*, "Movie Reviews," accessed March, 2025, https://www.commonsensemedia.org/movie-reviews.

[146] *Recording Industry Association of America (RIAA)*, "PAL Standards," accessed March, 2025, https://www.riaa.com/resources-learning/pal-standards/.

[147] *Recording Industry Association of America (RIAA)*, "Parental Advisory Label," accessed March, 2025, https://www.riaa.com/resources-learning/parental-advisory-label/.

[148] *RIAA*, "PAL Standards."

[149] *RIAA*, "PAL Standards."

different meanings and should not be viewed in isolation from the music that accompanies them (i.e., lyrics when accompanied by loud and raucous music can be perceived differently than the same lyrics when accompanied by soft and soothing music);
5. (sic) That such a determination requires sensitivity and common sense, and that context, frequency, and emphasis are obviously important; isolated or unintelligible references to certain material might be insufficient to warrant labeling a particular sound recording as containing PAL Content;
That these Standards apply to the case of a single track commercially released as well as to full albums (whether released in the form of a CD, cassette or any other configuration); and

5. That a sound recording may contain strong language or depictions of violence, sex, or substance abuse, yet due to other factors involved, may not merit a designation as containing PAL Content.
6. That these Standards apply to the case of a single track commercially released as well as to full albums (whether released in the form of a CD, vinyl record, or any other physical or digital format); and
7. That a sound recording may contain strong language or depictions of violence, sex, or substance abuse, yet due to other factors involved, may not merit a designation as containing PAL Content.
8. The record label or artist determination that a sound recording contains PAL Content shall affect the marketing, sale, and distribution of such sound recording, as described in greater detail throughout these Standards. For purposes of clarification, only the applicable record label or artist shall determine whether any particular sound recording contains PAL Content, and all other Participants shall abide by the applicable record label or artist's determination.[150]

The PAL Mark program and its guidelines have not been updated to reflect an era of online streaming platforms using AI and the creation of profiles to serve advertising and content to individuals. The program focuses only on explicit language, violence, sex and substance abuse, which is only a subset of a much broader array of harmful content that online streaming platforms could specifically target to children. Also, the only reference to online streaming platforms in the Pal Mark program is the following description of "Music Services":

> MUSIC SERVICES
>
> Today there are more places than ever to download, stream and buy music. Whether you prefer listening to vinyl or streaming online (or both!), there are more options out there than ever.
>
> It can be difficult, though, to determine which platforms provide music in a way that's fair to the artists you love. Why Music Matters has all the information you need on legitimate services and options to download music, listen to online radio, find vinyl and

[150] *RIAA*, "PAL Standards."

CD retailers, and stream your favorite tunes.[151]

Insufficient Flagging Mechanisms

Existing flagging mechanisms. This RIAA PAL Mark program is practiced differently across music streaming platforms. For example, on Apple Music, the creators themselves are responsible for flagging podcast episodes as "Explicit."[152] This leaves room for error if Apple Podcasts fails to flag any inappropriate content that was not censored by the creators themselves; given their interests in maximizing listeners, creators might not reliably flag their own podcasts.

Child safety interest groups. Child safety interest groups (Kidslox, Protect Young Eyes) work to identify strengths and weaknesses of platform-specific parental restrictions. Among many concerns, these groups discuss the prevalence of inappropriate content that has not been flagged, especially in podcasts. Protect Young Eyes found that toggling off "Allow explicit content" on Spotify only blocked songs labeled explicit, not podcasts.[153] For example, when they searched "sex" with the "Allow explicit content" toggle off, podcast titles still appear that indicate erotic audio. Protect Young Eyes found similar problems where explicit podcasts are not fully blocked on Amazon Music–it's still possible to read the description, and Apple Music explicit content still shows up in searches even though it can't be clicked on.

Public user forums. Some parents have identified faulty flagging mechanisms, an inability to understand parental control options, and the incorporation of children's listening data as primary concerns in a public Apple forum.[154] One parent who enabled restrictions for their child's Apple device commented, "Extremely explicit content is still being suggested to him and he is being allowed to play that content."[155] Online discussions also mention paywall issues in addition to a prevailing all-or-nothing mentality ("nursery rhymes or no filters") to child protection.[156]

User-led flagging. Alternatively, some platforms offer user-led flagging mechanisms. For example, Spotify's Safety & Privacy Center provides a reporting form and a list of actions that Spotify can take after content is flagged, including demonetization or removal.[157] Apple Music provides a "Suggest Less" feature but does not allow for the direct reporting of misidentified

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[151] *Recording Industry Association of America (RIAA)*, "Music Services," accessed April 3, 2025, https://www.riaa.com/resources-learning/music-services/.

[152] "Content Guidelines - Apple Podcasts for Creators." n.d. Podcasters.apple.com. https://podcasters.apple.com/support/891-content-and-subscription-guidelines.

[153] "*Protect Young Eyes*, "Ultimate Guide."

[154] Why Is My Daughter Able to Listen to Expl… - Apple Community." 2021. Apple.com. 2021. https://discussions.apple.com/thread/252361517?sortBy=rank.

[155] Apple Music Explicit Content on Child's R… - Apple Community." 2023. Apple.com. 2023. https://discussions.apple.com/thread/255007611?=undefined&previousThread=252361517021&sortBy=rank.

[156] Reddit - Dive into Anything." 2024. Reddit.com. 2024. https://www.reddit.com/r/Parenting/comments/1buz5qq/any_music_streaming_services_that_allow_blocking/.

[157] "Safety & Privacy Center." 2025. Spotify.com. 2025. https://www.spotify.com/us/safetyandprivacy/reporting-content.

explicit content without visiting the Product Feedback page for all Apple products.[158] Pandora has a "Thumbs Down" feature which "tells us [Pandora] not to play this track on this particular station."[159] This is intended as a measure of user preference for their algorithm, but does not directly contribute to the reporting of inappropriate content. Instead, the platform encourages users to visit the Pandora Community forum to lodge complaints on a separate page.[160]

Transparency of Parental Controls

Likely due to the voluntary nature of compliance with the PAL Mark program, across music streaming platforms, there are discrepancies in parental control mechanisms and a lack of transparency regarding resources available to parents. Many platforms have parental controls that allow for the restriction of explicit language/themes and content above certain rating levels.[161]

Spotify has a dedicated service, Spotify Kids, that offers additional protections; however, this service is only available to subscribers of Spotify Premium Family, which costs $19.99 a month.[162] According to the Spotify Kids privacy policy, Spotify Kids does not transfer or sell children's data to third parties for advertising. However, policies differ if a parent is offering their child the standard "adult" subscription to Spotify. Spotify's privacy policy states, "Younger users may have tailored advertising turned off by default. When you reach the appropriate age, you will start to receive tailored advertising."[163] However, the appropriate age may vary by country and region.

Users of Apple Music can modify restrictions through the Screen Time app on the guardian's phone. However, Pandora and YouTube Music allow for a child user to toggle "off" parental controls because those features are not password protected.[164]

Use of Children's Data in Advertising and Profiling

A child protection advocacy group, the Campaign for a Commercial-Free Childhood, filed a complaint with the FTC claiming that Amazon Music maintained a collection of children's voice data through the Amazon Echo Dot Kids Edition in alleged violation of the U.S. Children's Online Privacy and Protection Act (COPPA).

COPPA bans the collection of personal information and data of children under the age of 13

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[158] "Reporting a Song with Explicit Lyrics Tha… - Apple Community." 2022. Apple.com. 2022. https://discussions.apple.com/thread/254075287?sortBy=rank.

[159] Pandora, "Thumbs," Pandora Help, 2025, https://help.pandora.com/s/article/Thumbs-1519949305945?language=en_US#.

[160] "Pandora - Community & Content Policy." 2025. Pandora.com. 2025. https://www.pandora.com/legal/community-content-policy

[161] "Why Is My Daughter Able to Listen to Expl… - Apple Community." 2021. Apple.com. 2021. https://discussions.apple.com/thread/252361517?sortBy=rank.

[162] "Spotify Kids." n.d. Spotify. https://www.spotify.com/us/kids/.

[163] *Spotify*, "Privacy Policy."

[164] *Protect Young Eyes*, "Ultimate Guide to Streaming Music Apps (Including Podcasts)," *ProtectYoungEyes.com*, June 5, 2023, https://www.protectyoungeyes.com/blog-articles/ultimate-guide-streaming-music-apps-including-podcasts.

without parental consent.[165] The U.S. FTC's rules for implementing the COPPA Rules were updated in January 2025, the first time in over a decade. Notable changes include the requirement of 'separate parental consent for data sharing with third parties for targeted ads and non-integral purposes', 'expanding parental notice requirements', and 'enhancing data security requirements'.[166] The FTC has shown a willingness to enforce COPPA. Notably, in 2019, Google LLC and its subsidiary YouTube, LLC, were required to pay a record fine of $170 million as a result of illegally collecting personal information from child users without parental consent.[167]

Analysis

Children are at risk of being exposed to inappropriate content when parental restrictions on music streaming platforms are non-standardized, difficult to access and navigate, and subject to faulty flagging mechanisms. These risks increase when platforms collect children's personal data and use AI to recommend and personalize content. While Spotify offers a Spotify Kids account for children to navigate their services with protection and monitoring from guardians, not all platforms have services designed solely for children. Although Spotify Kids provides additional mechanisms for protection, it creates a financial barrier for parents to protect their children from age-inappropriate and explicit content by hiding protection mechanisms under a paywall.

Additionally, parents, users, and child safety interest groups have identified varying degrees of effectiveness in parental restriction features. For example, podcasts are often not included when explicit or age-inappropriate content is restricted on music streaming platforms. This highlights a gap in the protection mechanisms for age-inappropriate content, as podcasts and other forms of media have become integrated into music streaming platforms. The issue of a lack of parental control across platforms. Online streaming platform market concentration potentially creates a barrier to new entrants who would compete based on offering greater parental controls and protection of children.

Listeners should be able to easily flag and report age age-inappropriate content. Apple Music and Pandora, which lack accessible flagging mechanisms, have a higher likelihood of suggesting age-inappropriate content through their recommendation algorithms. Improved flagging mechanisms would be helpful and could work in concert with industry, artist, and platform controls to protect against age-inappropriate content that may cause harm to children.

Since music streaming platforms have expanded their offerings beyond songs to include podcasts, music videos, audiobooks, etc., their content restriction mechanisms should have shifted from the binary (explicit/non-explicit categorization) to something more nuanced and

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[165] Federal Trade Commission, "Children's Online Privacy Protection Rule ('COPPA')," 16 CFR Part 312, Federal Trade Commission, last modified January 11, 2024, https://www.ftc.gov/legal-library/browse/rules/childrens-online-privacy-protection-rule-coppa.

[166] Federal Trade Commission, "FTC Finalizes Changes to Children's Privacy Rule Limiting Companies' Ability to Monetize Kids' Data," press release, January 16, 2025, https://www.ftc.gov/news-events/news/press-releases/2025/01/ftc-finalizes-changes-childrens-privacy-rule-limiting-companies-ability-monetize-kids-data.

[167] Federal Trade Commission, "Google and YouTube Will Pay Record $170 Million for Alleged Violations of Children's Privacy Law," press release, September 4, 2019, https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law.

adaptable. A possible content restriction model could follow the Entertainment Software Rating Board (ESRB), the most common video game rating system used in the U.S. The ESRB consists of seven rating categories, with two a part of the rating-pending category, notifying parents that a game has yet to be thoroughly rated. Similarly, the Motion Picture Association film rating system assigns ratings to movies, determining the suitability of its content for certain audiences.[168] Expanding beyond video game and movie ratings, the Common Sense Media nonprofit works to assign age-appropriate ratings and guidelines to a myriad of media types, books, podcasts, websites, etc., to give parents an additional tool in keeping their children safe online.[169] Inappropriate content for children is not isolated to video games and movies, so organizations like Common Sense Media are helping to address other types of online media that children could have access to.

Additionally, utilization of children's streaming data can infringe upon their privacy and result in inappropriate algorithmic content recommendations. Children will benefit from stronger accountability measures in online music streaming to ensure that they are protected from these risks.

Recommendations

The RIAA should update its PAL Mark program for the use of AI and target profiling of children.

Use of the PAL Mark by online streaming services should include requirements not to use AI or other analytics to direct harmful content to children. The PAL Mark program should also update its standards to include a broader set of flagged content, drawing upon recent research in online harms to children on social media platforms.

The RIAA should establish a third-party review system for content moderation and flagging.

Given the inconsistency of content moderation and flagging across these platforms, the RIAA should establish a third-party oversight system for content moderation and flagging. The idea of 'Trusted Flaggers' is gaining traction in platform governance as well as being formally included in legislation. Trusted flaggers consist of third-parties that are given certain privileges, more than in-platform flagging privileges, when flagging content on platforms. Third-party review should be legally required by music streaming platforms to ensure children are not exposed to age-inappropriate content.

On an annual basis, the third-party should review the content moderation and flagging practices of online streaming platforms and publish a public report. The report should include an overall assessment of the resources, technologies, policies, and processes used by the services for content moderation and flagging. Recommendations for improvement and tracking progress on previous recommendations should also be a fundamental component of these reports.

Industry groups should create best practices around child safety features for parents, such as eliminating child-safety mechanism paywalls, blocking artists with no child-

[168] Motion Picture Association. "Film Ratings." Accessed March 26, 2025. https://www.motionpictures.org/film-ratings/.

[169] Common Sense Media. "Common Sense Media: Age-Based Media Reviews for Families." Accessed March 26, 2025. https://www.commonsensemedia.org/.

appropriate content, and implementing tighter security around features.
These best practices should include guidance for platforms to allow for more parental customization when setting up their child's account. Currently, platforms like YouTube and Apple Music only allow parents to turn off explicit content, without specifically allowing them to block and select certain artists for their children. Additionally, the best practices should include the controls to restrict children's access to specific artists with no child-appropriate content. These controls could also allow artists themselves to flag whether their content is intended for children., These customization changes should account for children's ability to circumnavigate parental controls through tighter security mechanisms. One method is to require a parent-specific password to make setting changes.. Current child internet safety groups (Fairplay, Protect Young Eyes) have pre-existing research and parental input to form a starting point for these best practices. These best practices should also include a prohibition on paywalling parental controls so that the protection of children does not come at a cost.

Conclusion

Human musicians create music that plays a critical role in the development of democracy. Technology can provide opportunities for musicians to reach broader audiences. AI, specifically, can provide opportunities to enable musicians to create new and innovative work. AI also has the promise to allow music to reach audiences with whom it will resonate with, inspire thought, and drive public policy action.

However, if online streaming platforms use AI to decrease compensation for human musicians and to prioritize music that serves to anesthetize listeners instead of activating them, then we run the risk of decreasing democratic participation and progress. Public policy should both provide tools for stakeholders to hold platforms accountable and to allow those platforms to demonstrate to the public and regulators that they are behaving responsibly. The recommendations in this paper are intended to help accomplish both of those goals.

Appendix A

Recommendations

1. **Intellectual Property**

1.A. Amend the U.S. Copyright Act

1.A.1. Amend Section 106 to explicitly address the need for authorization for AI training.

I.A.2.. Establish a compulsory licensing scheme under a new subsection of Section 115 of the U.S. Copyright Act, similar to the system currently in place for cover songs.

I.B. Ensuring transparency of data sources:

I.B.1. The music industry should research the use of Model cards to identify when and how AI models are using copyrighted material. creators and artists maintain effective control of their work and are fairly compensated for their work used in training datasets.

I.B.2 The music industry should research the use of AI trustmark or nutrition label.

1. C. Establish a Digital Watermarking Standard.

I.C.1. Government agencies should develop industry standards for digital watermarking of AI-generated content, enabling the tracking and identification of copyrighted material.

I.C.2. Streaming platforms should update their service agreements and terms of contract to detail royalty distributions for AI-generated music that contains digitally watermarked music.

2. **Anticompetitive Practices**

2.A. DOJ & FTC should analyze music industry acquisitions and ask whether they are anticompetitive.

2.B. The U.S. Congress should pass the Protect Working Musicians Act

2.B.1 Congress should consider adding a provision to provide musicians access to wage information currently obscured by streaming platform non-disclosure agreements.

2.C. Industry associations should collaborate on and publicize best practices on the transparency of payment models.

3. **Privacy**

Creation of best practices which include:

3.A. The extent to which user data should be shared with 3rd party entities and what obligations music streaming platforms should place on those organizations.

3.B. What inferences should be created from listener and musician data and the degree to which sensitive inferences should be restricted from use and transfer to the third parties.

3.C. What access, correction and deletion rights individuals should have to exercise control over their listening history and inferences drawn from their interaction with the streaming platforms.

4. Protection of Children

4.A. The RIAA should update its PAL Mark program for the use of AI and target profiling of children

4.B. The RIAA should establish a third-party review system for content moderation and flagging.

4.C. Industry groups should create best practices around child safety features for parents such as eliminating child-safety mechanism paywalls, blocking artists with no child-appropriate content, and implementing tighter security around features.

Appendix B

Spotify Privacy Policy

Privacy Policy - Spotify 4/3/25, 7:55 AM

Legal Terms and Conditions of Use Intellectual Property Policy Privacy Policy User Guidelines Paid Subscription Terms

E>ective as of 31 December 2024

1. About this Policy

This Privacy Policy describes how we at SpotiU USA Inc. process personal data of U.S. residents.

From now on, we'll call it the 'Policy'. It applies to your use of:

- all SpotiU streaming services as a user. For example this includes:
  - your use of SpotiU on any device
  - the personalization of your user experience. Watch our personalization explainer video to learn more about this.
  - the infrastructure required to provide our services
  - connection of your SpotiU account with another application
  - both our free or paid streaming options (each a '**Service Option**')
- other SpotiU services which include a link to this Policy. These include SpotiU websites, Customer

Service and the Community Site From now on, we'll collectively call these the '**Spoti& Service**'.

From time to time, we may develop new or o>er additional services. They'll also be subject to this Policy, unless stated otherwise when we introduce them. Our California Notice at Collection as required by the California Consumer Privacy Act applies to residents of California. If you are a resident of California, you should read this notice together with this Policy.

This Policy is not...

- the SpotiU Terms of Use, which is a separate document. The Terms of Use outline the legal contract between you and SpotiU for using the SpotiU Service. It also describes the rules of SpotiU and your user rights
- about your use of other SpotiU services which have their own privacy policy, such as Megaphone.

Other resources and se;ings

Key information about your personal data is right here in this Policy. However, you might want to take a look at our other privacy resources and controls:

Safety & Privacy Center: A user-friendly hub with summaries of key topics and helpful videos. It includes the 'Your Privacy Controls' video which shows you how to exercise your user rights and make choices about the way we process your data. See Section 2 'Your personal data rights and controls' for more on user rights.
Account Privacy: Control the processing of certain personal data, including tailored advertising.

Notification Seeings Set which marketing communications you get from SpotiU.
Seeings (found in the Desktop and Mobile versions of SpotiU): Control certain aspects of the SpotiU Service such as 'Social' or 'Explicit Content'. On the 'Social' seeing, you can:
- start a Private session
- choose whether to share what you listen to on SpotiU with your followers
- choose whether to show your recently played artists on your public profile

On the 'Explicit Content' seeing you can control whether explicit-rated content can be played on your SpotiU account.

Cookies Policy: Information on how we use cookies and how to manage your cookie preferences. Cookies are files saved on your phone, tablet or computer when you visit a website.

2. Your personal data rights and controls

Certain U.S. states have adopted privacy laws that give certain rights to individuals over their personal data. We provide these rights to all residents of the U.S., regardless of where they live.

The table below explains:
- your rights
- how to exercise them

You can also watch our video about Your Privacy Controls. You will not receive discriminatory treatment for exercising any of your privacy rights.

It's your right to...		**How?**
Be informed	**Be informed of the personal data we process about you and how we process it.**	We inform you: through this Policy through information provided to you as you use the SpotiU Service by answering your specific questions and requests when you contact us
Know/ Access	**Request to know and access the personal data we process about you.**	To request a copy of your personal data from SpotiU, either: use the 'Download your data' tool on your Account Privacy page, or contact us When you download your data you will receive the information about your data that SpotiU has to provide under applicable laws. If you would like more information about how we process your personal data, you can contact us.
Correction	**Request that we amend or update your personal data where it's inaccurate.**	You can edit your User Data under 'Edit profile' in your account or by contacting us.

Deletion	**Request that we delete certain of your personal data.** Please note there are situations where SpotiU is unable to delete your data, for example when: it's still necessary to process the data for the purpose we collected it for we have an overriding interest in continuing to process the data, for example where we need the data to protect our services from fraud SpotiU has a legal obligation to keep the data, or SpotiU needs the data to establish, exercise or defend legal claims. For example, if there's an unresolved issue relating to your account	There are several ways you can delete personal data from SpotiU: to remove audio content you have saved, select the relevant content and choose to remove it. For example you can remove a track from your playlist or remove an artist you've saved to your Library to request deletion of your account data from SpotiU and close your account, follow the steps on our support page. This data includes your User Data, Usage Data and other data listed in Section 3 'Personal data we collect about you' for any other deletion requests, you can contact us or reach out to customer support via our chat bot

Opt-out of tailored advertising	**Request to opt out of the processing of your personal data for tailored advertising.** For more information about our processing for these purposes, see the section 'Tailored advertising controls' below.	You can exercise your right to opt out on your Account Privacy page under 'Tailored Ads'. If you do not have an account or are not logged in, you can also opt out by clicking the 'Your Privacy Choices' link at the footer of our website.
Data portability	**Request a copy of your personal data in electronic format and the right to transmit that personal data for use in another party's service.**	For information about how to exercise the right to portability, see 'Know/Access' above.
Not be subject to automated decision making	**Not be subject to a decision based solely on automated decision making (decisions without human involvement), including profiling, where the decision would have a legal eUect on you or produce a similarly significant eUect.**	SpotiU does not carry out this type of automated decision making in the SpotiU Service.
Withdrawal of consent	**Withdraw your consent to us collecting or using your personal data.** You can do this if SpotiU is processing your personal data solely based on your consent.	To withdraw your consent, you can: • adjust the relevant control on SpotiU • contact us

Veri&ing requests, generally
To veriU a request to know, request to delete, and request to correct, we ask you to provide certain details related to your SpotiU account. Please note, if you do not have a SpotiU account we will not have enough information about you to veriU your identity and respond to your requests, as we do not keep su>icient information necessary to re-identiU and link you to a prior visit to the SpotiU Service where data may have been collected. As such, we will be unable to veriU and honor your requests.

Household requests
If all the members of a household make an access, correction or deletion request, we will respond as if the requests are individual requests.

Requests made through agents
You may designate, in writing or through a power of aeorney (in accordance with local law), an authorized agent to make requests on your behalf to exercise your rights. Before accepting such a request from an agent, we will require the agent to provide proof you have authorized it to act on your behalf, and we may need you to veriU your identity directly with us.

Appeals process
If your request is denied you may have the right to appeal the denial in accordance with the instructions provided to you when the denial was made.

Tailored advertising controls

What is tailored advertising?

This is when we use information about your use of our services and other websites and mobile apps to tailor ads to be more relevant to you. This is also known as interest based advertising, targeted advertising, or 'sharing' for purposes of cross-context behavioural advertising. An example of tailored advertising is when an advertising partner provides us with information indicating that you may be interested in cars. This could enable us to show you ads about cars.

How to control tailored advertising:

You can control tailored advertising on your Account Privacy page under 'Tailored Ads'.
If you do not have an account or are not logged in, you can also opt-out by clicking the 'Your Privacy Choices' link at the footer of our website. You can also control tailored advertising for some podcasts using the link in the episode's show description. This applies where the content provider inserts advertising into the podcast to fund it. The hosting provider, which might not be SpotiU, manages these controls for the podcast. You can also visit our services via a browser with a recognized opt-out preference signal enabled, such as the Global Privacy Control (GPC). If you use a preference signal you may need to renew your preferences if you visit the SpotiU Service with another device or browser, or if you clear your cookies.

If you are 'opted out' of tailored advertising on your Account Privacy page, you will receive less relevant advertising, including on our free Service Option, as well as our paid Service Option, as applicable (for example, advertising in podcasts). This type of advertising is based on your registration information and what you are currently listening to on our services. For example, if you are listening to a cooking podcast, you may hear an ad for a food processor.

Appropriate age for tailored advertising:

Younger users may have tailored advertising turned o> by default. When you reach the appropriate age, you will start to receive tailored advertising . When this happens, you will receive a message within the SpotiU Service to let you know. This message will contain a link to the Account Privacy page where you can change your preferences or 'opt-out' of tailored advertising at any time under Tailored Ads.

3. Personal data we collect about you

These tables set out the categories of personal data we collect from you. You can also watch our video about Personal Data at SpotiU.

Collected when you sign up for the Spoti& Service or when you update your account	
Categories	**Description**

User Data	Personal data that we need to create your SpotiU account and that enables you to use the SpotiU Service. The type of data collected and used depends on the type of Service Option you have. It also depends on how you create your account, the country you are in, and if you use third party services to sign in. This may include your: profile name email address password phone number date of birth gender street address (see further details below) country university/college (for SpotiU Premium Student) We receive some of this data from you e.g. from the sign up form or account page. We also collect some of this data from your device e.g. country or region. For more information about how we collect and use this data, see 'Your general (non-precise) location' in the Usage Data category.
Street Address Data	We may ask for and process your street address for the following reasons: to check eligibility for a Service Option to deliver notices which are required by law to deliver support options for billing and tax administration to deliver physical goods or giks which you have requested In some cases, we may use a third party application to help you veriU your address, such as Google Maps.

Collected through your use of the Spoti& Service	
Categories	**Description**

Usage Data Personal data collected and processed about you when you're accessing or using the SpotiU

Service. There are a few types of information this includes, listed in the following sections.

Information about how you use Spoti&

Examples include:
information about your SpotiU Service Option
your actions with the SpotiU Service (including date and time), such as:
search queries
streaming history

playlists you create
your library
browsing history
account seeings
interactions with other SpotiU users
your use of third party services, devices and applications in connection with the SpotiU Service
inferences (i.e., our understanding) of your interests and preferences based on your usage of the SpotiU Service
content you provide when participating in SpotiU promotions, such as contests or sweepstakes
content you post to any part of the SpotiU Service. For example: images, audio, text, titles, descriptions, communications, and other types of content

Your technical data

Examples include:
URL information
online identifiers such as cookie data and IP addresses
information about the devices you use such as:
device IDs
network connection type (e.g. wifi, 4G, LTE, Bluetooth)
provider
network and device performance
browser type
language
information enabling digital rights management
operating system
SpotiU application version
information which enables us to discover and connect with third party devices and applications. Examples of this information are the device name, device identifiers, brand and version. Examples of third party devices and applications are:
devices on your wifi network (such as speakers) which can connect to the SpotiU Service
devices your operating system makes available when connecting via Bluetooth, plugin, and installation
SpotiU partner applications to determine whether the application is installed on your device

Your general (non-precise) location

Your general location includes country, region or state. We may learn this from technical data (e.g. your IP address, language seeing of your device) or payment currency.

We need this to:
meet geographic requirements in our agreements with the owners of content on the SpotiU Service
deliver content and advertising that's relevant to you

Your device sensor data

Motion-generated or orientation-generated device sensor data if needed to provide features of the SpotiU Service that require this data. This is data which your device collects about the way you move or hold your device.

Additional data you may choose to give us	
Categories	**Description**

Payment and Purchase Data If you make any purchases from SpotiU or sign up for a paid Service Option or a trial, we will need to process your payment data.

The exact personal data collected and used will vary depending on the payment method. It will include information such as:

- name
- date of birth
- payment method type (e.g. credit or debit card)
- if using a debit or credit card, the card type, expiration date, and certain digits of your card numberNote: For security, we never store your full card number
- ZIP/postal code
- mobile phone number
- details of your purchase and payment history

Survey and Research Data	When you respond to a survey or take part in user research, we collect and use the personal data you provide as described in the survey or research.

We receive some of the data mentioned above from third parties. The below table describes the categories of those third parties.

Third party sources that we receive your data from		
Categories of third parties	**Description**	**Data categories**
Authentication partners	If you register for or log into the SpotiU Service using another service, that service will send your information to us. This information helps create your account with us.	User Data
Third party applications, services and devices you connect to your SpotiU account	If you connect your SpotiU account to a third party application, service or device, we may collect and use information from them. This collection is to make the integration possible. These third party apps, services or devices may include: social media devices including: audio (e.g. speakers and headphones) smart watches televisions mobile phones and tablets automotive (e.g. cars) games consoles services or platforms such as voice assistants or content platforms We'll ask your permission before we collect your information from certain third parties.	User Data Usage Data
Technical service partners	We work with technical service partners that give us certain data. This includes mapping IP addresses to non-precise location data (e.g., country or region, city, state). This makes it possible for SpotiU to provide the SpotiU Service, content, and features. We also work with security service providers who help us protect user accounts.	User Data Usage Data

Payment partners and Merchants If you choose to pay through third parties (e.g. telco carriers) or by invoice, we may get data from our payment partners.

This allows us to:
send you invoices
process your payment
give you what you've purchased

If we direct you to a merchant, we receive data from the merchant that is related to your purchase. For example, we might direct you to an artist's merchandise store on a third party platform or to a third

Payment and Purchase Data

party ticketing website.

Receiving this data allows us to:
calculate any commissions owed to us
analyze the e>ectiveness of our partnership with these merchant partners
understand your interests

Advertising and marketing partners	We receive inferences from certain advertising or marketing partners. These inferences are the partners' understanding of your interests and preferences. This allows us to deliver more relevant ads and marketing.	Usage Data
Acquired companies	We may receive data about you from companies we acquire. This is to enhance our services, products, and o>erings.	User Data Usage Data

If you download the SpotiU mobile app and try SpotiU using a logged out user experience, we will collect limited information about your usage of the SpotiU Service, including Usage Data. We do this to understand how you are accessing and using the Service. We also do this to ensure we provide the right experience for you, for example based on your country or region. If you decide to create a SpotiU account to experience our service in full, then we will combine this data with your SpotiU account data.

4. Our purpose for using your personal data

The table below sets out:
our purpose for processing your personal data
categories of personal data which we use for each purpose. See more about these categories in Section 3 'Personal data we collect about you'

You can also watch our video about Personal Data at SpotiU.

Purpose for processing your data	**Categories of personal data used for the purpose**

To provide the SpotiU Service. For example, when we use your personal data to: • set up an account for you • personalize your account • provide the SpotiU app when you download it onto your device, • enable you to share a link to SpotiU content with someone else, or • provide various optional features of the SpotiU Service	User Data Street Address Data Usage Data Payment and Purchase Data Survey and Research Data
To diagnose, troubleshoot, and fix issues with the SpotiU Service.	User Data Usage Data
To evaluate and develop new features, technologies, and improvements to the SpotiU Service. For example: • we use personal data to develop and improve our personalized recommendation algorithms • we analyze how our users react to a particular new feature and see whether we should make any changes	User Data Usage Data Survey and Research Data
For marketing or advertising purposes. For example: • when we use your personal data to tailor advertising to your interests, or • when we send you email marketing	User Data Usage Data Survey and Research Data

To comply with a legal obligation that we are subject to. User Data Street Address Data

  This might be: • an obligation under the law of the country / region you are in • Swedish law (because of our headquarters in Sweden), or • EU law that applies to us For example, when we use your date of birth when required for age verification purposes.	 Usage Data Payment and Purchase Data Survey and Research Data
To comply with a request from law enforcement, courts, or other competent authorities.	User Data Street Address Data Usage Data Payment and Purchase Data Survey and Research Data

To fulfill contractual obligations with third parties. For example, when we provide pseudonymized data about our users' listening because we have an agreement with a SpotiU rightsholder to do so. Pseudonymized data means that your data is identified by a code rather than your name or other directly identiUing information.	User Data Usage Data Payment and Purchase Data
To take appropriate action with reports of intellectual property infringement and inappropriate content.	User Data Usage Data Payment and Purchase Data
To establish, exercise, or defend legal claims. For example, if we are involved in litigation, we need to provide information to our lawyers in relation to that legal case.	User Data Street Address Data Usage Data Payment and Purchase Data Survey and Research Data
To conduct business planning, reporting, and forecasting. For example, when we look at aggregated user data like the number of new sign ups in a country in order to plan new locations to launch our products and features in.	User Data Usage Data Payment and Purchase Data
To process your payment. For example, when we use your personal data to let you purchase a SpotiU subscription.	User Data Payment and Purchase Data Street Address Data
To keep the SpotiU Service secure and to detect and prevent fraud. For example, when we analyze Usage Data to check for fraudulent use of the SpotiU Service.	User Data Street Address Data Usage Data Payment and Purchase Data
To conduct research and surveys. For example, when we contact our users to ask for your feedback.	User Data Usage Data Survey and Research Data

5. Disclosing your personal data

This section sets out who receives personal data which is collected or generated through your use of the SpotiU Service.

Publicly available information

The following personal data will always be publicly available on the SpotiU Service (except to any user you have blocked):

- your profile name
- your profile photo
- your public playlists
- other content you post on the SpotiU Service, and any associated titles, descriptions and images

You or another user can share certain information on third party services, like social media or messaging platforms. This includes:

- your profile
- any content you post on SpotiU and details about that content
- your playlists and any associated titles, descriptions and images

When this sharing occurs, the third party service may store a copy of it to support their features.

Personal data you may choose to disclose

We will only disclose the following personal data with those outlined in the table below

- where you have chosen to use a SpotiU Service feature, or a third party application, service or device, and we need to disclose personal data to enable this, or
- if you otherwise grant us your permission to disclose the personal data. For example, you can do it by selecting the appropriate seeing in the SpotiU Service or by giving your consent.

Categories of recipients	**Categories of data you can choose to share**	**Reason for choosing to share**
Third party applications, services and devices you connect to your SpotiU account	• User Data • Usage Data	To connect your SpotiU account, or so that you can use the SpotiU Service in connection with third party applications, services or devices. Examples of such third party applications, services and devices include: • social media applications • speaker devices • televisions • automotive platforms • voice assistants You can see and remove many third party connections under 'Apps' in your account.
Support community	• User Data	To enable you to use the SpotiU Support Community service. When you register for an account on the SpotiU Support Community, we'll ask you to create a profile name. This will be publicly displayed to anyone who uses the SpotiU Support Community. We'll also display any questions or comments you post.
Other SpotiU users	• User Data • Usage Data	To share information about your use of the SpotiU Service with other SpotiU users. These could include your followers on SpotiU. For example, under 'Social' seeings you can choose to share your recently played artists and your playlists on your profile. You can also choose to create or join a shared playlist with other users. Shared playlists give you social recommendations based on your listening activity.

Artists and record labels	• User Data	To receive news or promotional o>ers from artists, record labels or other partners. You may choose to share your User Data for this purpose when you sign up to the SpotiU Service. You'll always have the option to change your mind and withdraw your consent at any time.

Information we may disclose

See this table for details of who we disclose to and why.

Categories of recipients	**Categories of data**	**Reason for disclosing**
Service providers	• User Data • Street Address Data • Usage Data • Payment and Purchase Data • Survey and Research Data	So they can provide their services to SpotiU. These service providers include those we hire to: • give customer support • operate the technical infrastructure we need to provide the SpotiU Service • assist in protecting and securing our systems and services (e.g. Google's reCAPTCHA) • help market SpotiU's (and our partners') products, services, events and promotions • veriU your eligibility for certain types of Service Options (e.g., SpotiU Premium Student)
Payment partners	• User Data • Payment and Purchase Data	So they can process your payments, and for anti-fraud purposes.
Advertising partners	• User Data • Usage Data	So they can help us deliver more relevant advertising to you on the SpotiU Service, and help measure the e>ectiveness of ads. For example, our ad partners help us facilitate tailored advertising. With respect to SpotiU Service users under the age of 18, we do not disclose personal data to advertising partners by default.

Marketing Partners	• User Data • Usage Data	To promote SpotiU with our partners. We disclose certain User Data and Usage Data to these partners where necessary to: • enable you to participate in SpotiU promotions, including trials or other bundled o>ers • to promote SpotiU in media and advertising published on other online services • help us and our partners to measure the e>ectiveness of SpotiU promotions Examples of partners include: • marketing or sponsorship partners • websites and mobile apps who sell us advertising space on their services • device, app and mobile partners who also o>er SpotiU promotions Our partners may also combine the personal data we disclose to them with other data they collect about you, e.g. your use of their services. We and our partners may use this information to present you with o>ers, promotions, or other marketing that we think you'll find relevant. With respect to SpotiU Service users under the age of 18, we do not disclose personal data to marketing partners by default.
Ticketing and event partners	• User Data	For every event for which we sell tickets, we will need to disclose your name, email or other order details to our event partners such as ticketing agent or venue box o>ice where the event is taking place so that you can check in as a verifiable guest who purchased tickets through SpotiU's ticketing platform.
Podcast Hosting Platform ttps://www.spotify.com/us/legal/	• Usage Data	Hosting platforms host podcasts so that they can deliver them to you. We disclose certain data, such as your IP address, to the podcast hosting platforms when you play a podcast. We also allow you to stream podcasts

		  available from other hosting platforms not owned by SpotiU. Podcast providers should explain in the show or episode description which platform is hosting the podcast. See the hosting platform's own privacy policy for how they use data disclosed to them.
Academic researchers	• User Data • Usage Data	For activities such as statistical analysis and academic study, but only in a pseudonymized format.

Other SpotiU group companies, including companies that SpotiU acquires	• User Data • Street Address Data • Usage Data • Payment and Purchase Data • Survey and Research Data	To carry out our daily business operations and so we can maintain, improve and provide the SpotiU Service and acquired companies' services to you. For example: • enabling our employees who work for di>erent group companies to develop and improve features for the SpotiU Service • disclosing data to our measurement companies to measure the e>ectiveness of ad campaigns that run on the SpotiU Service • disclosing data to our podcast companies to beeer understand user listening trends
Law enforcement and other authorities, or other parties to litigation	• User Data • Usage Data	When we believe in good faith it's necessary for us to do so, for example: to comply with a legal obligation to respond to a valid legal process (such as a search warrant, court order, or subpoena) for our own or a third party's justifiable interest, relating to: national security law enforcement litigation (a court case) criminal investigation protecting someone's safety preventing death or imminent bodily harm
Purchasers of our business	• User Data • Street Address Data • Usage Data • Payment and Purchase Data • Survey and Research Data	If we were to sell or negotiate to sell our business to a buyer or possible buyer. In this case, we may transfer your personal data to a successor or a>iliate as part of that transaction.

6. Data retention

We keep your personal data only as long as necessary to provide you with the SpotiU Service and for SpotiU's legitimate and essential business purposes, such as:

maintaining the performance of the SpotiU Service
making data-driven business decisions about new features and o>erings
complying with our legal obligations
resolving disputes

Here are some of the categories of our retention periods, and the criteria we use to determine them:

Data retained until you remove it

It's your right to request that we delete certain of your personal data. See the section on 'Deletion' in Section 2 'Your personal data rights and controls' for more information, and the circumstances in which we can act on your request.

You can also delete certain personal data directly from the SpotiU Service: for example, you can edit or delete your profile picture. Where users are able to see and update the personal data themselves, we keep the information for as long as the user chooses unless one of the limited purposes described below applies.

Data that expires a]er a specific period of time

We have set certain retention periods so that some data expires aker a specific period of time. For example, personal data you may input as part of search queries is generally deleted aker 90 days.

Data retained until your Spoti& account is deleted

We keep some data until your SpotiU account is deleted. Examples of this include your SpotiU username and profile information. We also typically keep streaming history for the life of an account, for example, to provide retrospective playlists that users enjoy and personalized recommendations that take listening habits into account (for example, Your Time Capsule or Your Summer Rewind). When your SpotiU account is deleted, this category of data is deleted or de-identified.

Data retained for extended time periods for limited purposes

Aker your account is deleted, we keep some data for a longer time period but for very limited purposes. For example, we may be subject to legal or contractual obligations that require this. These may include mandatory data retention laws, government orders to preserve data relevant to an investigation, or data kept for the purposes of litigation. We may also keep data that has been removed from the SpotiU Service for a limited period of time. This could be: to help ensure user safety, or
to protect against harmful content on our platform.

This helps us investigate potential breaches of our User Guidelines and Platform Rules. On the other hand, we will remove unlawful content if the law requires us to do so.

7. Transfer to other countries

Because of the global nature of our business, SpotiU transfers personal data internationally with SpotiU group companies, subcontractors and partners when carrying out the activities described in this Policy.

Whenever we transfer personal data internationally, we use tools to make sure the data transfer complies with applicable law.

We also identiU and use additional protections as appropriate for each data transfer. For example, we use:
- technical protections, such as encryption and pseudonymization
- policies and processes to challenge disproportionate or unlawful government authority requests

8. Keeping your personal data safe

We're commieed to protecting our users' personal data. We put in place appropriate technical and organizational measures to help protect the security of your personal data. However, be aware that no system is ever completely secure.

We have put various safeguards in place to guard against unauthorized access and unnecessary retention of personal data in our systems. These include pseudonymization, encryption, access, and retention policies.

To protect your user account, we encourage you to:
- use a strong password which you only use for your SpotiU account
- never share your password with anyone
- limit access to your computer and browser
- log out once you have finished using the SpotiU Service on a shared device
- read more detail on protecting your account

You can log out of SpotiU in multiple places at once by using the 'Sign out everywhere' function on your account page.

If other individuals have access to your SpotiU account, then they can access personal data, controls and the SpotiU Service available in your account. For example, you might have allowed someone to use your account on a shared device.

It's your responsibility to only allow individuals to use your account where you're comfortable sharing this personal data with them. Anyone else's use of your SpotiU account may impact your personalized recommendations.

9. Children

Note: This Policy doesn't apply to SpotiU Kids except where the SpotiU Kids Privacy Policy says so. SpotiU Kids is a separate SpotiU application.

The SpotiU Service has a minimum 'Age Limit' in each country or region. The SpotiU Service is not directed to children whose age:

- is under the age of 13 years
- makes it illegal to process their personal data, or
- requires parental consent to process their personal data

We do not knowingly collect or use personal data from children under the applicable Age Limit. If you're under the Age Limit, do not use the SpotiU Service, and do not provide any personal data to us. Instead, we recommend using a SpotiU Kids account.

If you're a parent of a child under the Age Limit and become aware that your child has provided personal data to SpotiU, contact us.

If we learn that we've collected the personal data of a child under the applicable Age Limit, we'll take reasonable steps to delete the personal data. This may require us to delete the SpotiU account for that child.

When using a shared device on the main SpotiU Service, be cautious about playing or recommending any inappropriate content to individuals under 18 years old.

10. Privacy Request Metrics

The following chart contains statistics about global requests we received from users between 1 January and 31 December 2023:

Type of request	Received	Complied	Denied	Average response rate
Right to Know / Access	2,375,576	2,375,576	0	9.88 days
Request to Delete	6,367,692	6,367,692	0	15.5 days
Request to Correct*	38	32	6	13.84 days
Request to Opt-Out of Data Sharing for Tailored Ads	78,145,777	78,145,777	0	1 day

*Adjustments in the user account within the Service made either by the user themselves or aided by customer services are not counted as correction requests (e.g., user updated their display name)

11. Changes to this Policy

We may occasionally make changes to this Policy.

When we make material changes to this Policy, we'll provide you with prominent notice as appropriate under the circumstances. For example, we may display a prominent notice within the SpotiU Service or send you an email or device notification.

12. How to contact us

For any questions or concerns about this Policy, contact our Data Protection O>icer any one of these ways:
email privacy@spotiU.com
write to us at: SpotiU USA Inc., 150 Greenwich Street, Floor 62, New York, NY 10007, USA

SpotiU USA Inc. is the data controller of personal data processed under this Policy.