



## Ethics in AI-Enhanced Music

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Title/Incident Name: Drake and The Weeknd AI song called Heart on My Sleeve was created by ghostwriter977 and pulled from music streaming platforms. [1][2]

Date: October 7, 2023

Reported by: Group 5, 6388072 Pimmada Tularak, 6388133 Pitchaya Teerawongpairoj

Date/ Period of Incident: Tuesday, April 4, 2023

- Activities During the Incident:
  - The Universal Music Group took down a fake song called “Heart on My Sleeve” on several music streaming platforms involved in the incident, including Deezer, YouTube, Spotify, Apple Music, SoundCloud, Amazon Music, and Tidal.
- Parties Involved:
  - Parties involved Drake (rapper and singer), The Weeknd, and Universal Music Group (UMG) were involved in the incident.
- Tech Insights:
  - The use of an AI music generator to mimic artists' voices and then upload these tracks to music streaming platforms was one of the main vulnerabilities related to AI music. The goal of these actions was to earn revenue from these uploads.
- Perpetrator:
  - The incident was released by a user on TikTok by the username Ghostwriter977.
- Root Causes:
  - The realization that a lot of fans enjoy hearing their favorite artists cover other artists' songs is one of the main causes of this problem. As a result, some people started using AI music generators to create the voices of artists. For example, Freddie Mercury covered Michael Jackson's song in 1983, Ariana Grande covered Drake's song in 2017, Rihanna covered Beyoncé's song in 2022, etc.
- Source of Exploit:
  - Ghostwriter977 released "Heart on My Sleeve" on several music platforms on April 4. On April 15 a video clip of the song was also released on TikTok.
- Tech Insights:
  - The availability of instruments that let anyone mimic the voices of artists is the source of vulnerabilities in AI music generators. Attackers may take advantage of an individual artist's popularity to gain reputation, money, and social acceptance.
- Impacts & Consequences:
  - The song's lyrics affected the artists' reputation, including Justin Bieber, Drake, The Weeknd, Selena Gomez, and 21 Savage. The lyrics were about complicated relationships and collaborations among Drake, The Weeknd, Selena Gomez, and 21 Savage.
- Actions Taken / Solutions:
  - The song was immediately taken down from Apple Music, Spotify, Deezer, and Tidal by Universal Music Group. Also proceeding to remove the song from TikTok and YouTube.
- Effect Management / Future Plans:
  - It's necessary that music platforms set up policies regarding AI music generators due to this incident to prevent copyright infringement. Companies might also think about becoming in contact with music streaming platforms to request the removal of songs that are not protected by copyright.

- Incident Severity & Response:
  - Because the incident involved harmful lyrics directed at artists and had an opportunity to spread false rumors, its severity is high. Companies can currently only ask music platforms to take down songs that aren't protected by copyright and push for rules to stop music copyright violations.
- Identifying Trends:
  - The incident reveals the common consumption of AI music tools for creating and sharing artists' voices on music streaming platforms like YouTube, TikTok, Spotify, etc.
- Mitigation & Prevention:
  - Tracking songs that aren't non-copyrighted on music streaming platforms is one suitable way to solve this problem. To help stop similar incidents in the future, rules maintaining the use of AI music tools to mimic artists' voices and their uploads on music streaming platforms should be investigated.
- Data Privacy:
  - Data privacy concerns related to this incident include intellectual property rights, consent, personal reputation, and ethical conduct.
- Disclosure:
  - Stakeholders received notification about the incident as soon as the song became popular. The song's removal from music platforms took some time, which led to a response time delay.
- Accountability:
  - To resolve the issue, the company needed to request the song's removal from the music streaming platforms where songs are released.
- Key Insights:
  - The importance of educating people who work in the music industry about copyright, consent, and legal issues to prevent intellectual property is one of the incident's most important lessons.
- Recommendations:
  - Organizations may set up policies to reduce the harm of AI music by taking lessons from this incident. For example, creating specialized teams to look through music streaming platforms for AI music generators that violate intellectual property rights and copyright for prevention.

Title/Incident Name: AI music is currently called "fraud" by Universal Music Group, which wants it removed from music streaming platforms. [3]

Date: 11 October 2023

Reported by: Group 5, 6388072 Pimmada Tularak, 6388133 Pitchaya Teerawongpairoj

Date/ Period of Incident: Tuesday, April 18, 2023

- Activities During the Incident:
  - The Universal Music Group strongly wrote letters to Spotify and Apple Music in April to stop AI music that is non-copyright.
- Parties Involved:
  - Parties involved the Universal Music Group, Spotify, and Apple Music.
- Tech Insights:
  - One of the primary vulnerabilities related to AI music was the application of an AI music generator to create songs that mimicked the voices of artists, and songs were uploaded to music streaming platforms.
- Perpetrator:
  - People who use AI music tools to mimic the voices of artists and release their songs on music streaming platforms. People who do this will receive more reputation and money.
- Root Causes:
  - This problem comes from fans enjoying hearing their favorite artists' cover songs by other artists. As a result, some people have started using AI music generators to mimic the voices of artists. At the same time, fans might not know enough about consent, intellectual property rights, and ethical issues. For example, the Grammy winner who is a producer named David Guetta showed that easy to use AI music tools to create new music. Guetta wrote a new song in an hour using Uberduck for vocals and ChatGPT for lyrics.
- Source of Exploit:
  - The original incident happened on Spotify and Apple Music. Both are popular music streaming platforms.
- Tech Insights:
  - Attackers create content that matches the style of the artists' vibe by using AI music generators that mimic popular artists. Then post this fake music to social media or music streaming platforms, passing them out as the original artists' work. Consequently, they get to gain a large following, money, and social reputation from ignorant fans who don't realize the material wasn't made by the artist they love to listen to music.
- Impacts & Consequences:
  - Since those who mimic may receive their income and royalties, it can cause artists to financial losses. Additionally, artists may have reputational harm because of having their creative ethics infringed and possibly having their reputation damaged. Legally, copyright infringement and intellectual property rights are primary problems that could result in pricey lawsuits.
- Actions Taken / Solutions:
  - The Universal Music Group sent an urgent letter to Spotify and Apple Music to block AI music from their music streaming platform.

- Effect Management / Future Plans:
  - It is essential to use technologies to detect and prevent the sharing of AI music that pretends to be artists to regulate and decrease the effects of this incident. To reduce the impact of the incident, fans must also be educated about the risks of this technology and the significance of following intellectual property rights.
- Incident Severity & Response:
  - The incident is significant because it raises legal issues and has an impact on the finances and reputation of artists. Attacks on content that violates copyrights, enhanced verification, and collaboration with law enforcement for ability lawsuits should all be part of the response.
- Identifying Trends:
  - Incidents like this will happen because this is the beginning of the music industry's use of AI. To find patterns and trends in the production and distribution of AI music that pretends to be artists, data analytics and AI can be used. With the use of this data, security protocols can be modified according to future threats.
- Mitigation & Prevention:
  - To prevent incidents, set up policies and guidelines for songs. Artists should also be required to provide biometric information or authentication to verify their identity. In advance recognizing illegal uploads can be assisted by using AI and machine learning to identify errors in the music industry.
- Data Privacy:
  - Concerns about data privacy include copyright, intellectual property, and ethical conduct.
- Disclosure:
  - Requests from Universal Music Group were not answered by Spotify and Apple Music.
- Accountability:
  - To solve accountability issues, law enforcement should work with them to find and bring charges against those who create false information using AI music. The Universal Music Group addressed this situation by asking Spotify and Apple Music to block AI music.
- Key Insights:
  - The most important lessons to be learned from this incident are the requirement for proactive artist and fan education regarding AI music.
- Recommendations:
  - Organizations ought to engage in innovative AI tools to detect false content, set up strict rules for content verification, and work closely with artists and AI developers. In addition, fans should be informed about the dangers of consuming mimic content, and artists should take proactive steps to protect their intellectual property rights.

Title/Incident Name: The first copyright case involving AI using song lyrics, was filed by music publishers.[4]

Date: 12 October 2023

Reported by: Group 5, 6388072 Pimmada Tularak, 6388133 Pitchaya Teerawongpairoj

Date/ Period of Incident: Thursday, October 19, 2023

- Activities During the Incident:
  - A music publisher which is Universal Music sued the AI company for using song lyrics without permission.
- Parties Involved:
  - The parties involved in this incident included Concord Publishing, ABKCO, Universal Music, and Anthropic, the AI company that created the chatbot “Claude”.
- Tech Insights:
  - The incident is about the unauthorized use of song lyrics for a chatbot, which is a violation of copyright. Problems are about AI music generators' content, intellectual property rights, and data scraping.
- Perpetrator:
  - The perpetrator in this incident is Anthropic which is an AI company.
- Root Causes:
  - Nowadays, open AI is becoming more and more well-known. Several companies are working to improve AI capabilities and provide AI as a service. It's important to keep in mind that open AI sometimes gathers information from the internet without considering copyright or consent.
- Source of Exploit:
  - The incident started when Anthropic trained its open AI program to interact with customers by using the lyrics of different songs from the internet without consent and copyright.
- Tech Insights:
  - Due to the revenue that the company will gain from providing services for open AI, the company doesn't care about consent, copyright, intellectual property rights, or music that is ethical for the original lyrics of the song.
- Impacts & Consequences:
  - This incident has financial and legal consequences, including reputational damage for Anthropic due to the lawsuit. Anthropic gains revenue from providing OpenAI services to its customers. And the finances of the music publisher might decrease.
- Actions Taken / Solutions:
  - The music publishers have sued Anthropic to stop copyright infringement.
- Effect Management / Future Plans:
  - Anthropic may need to think about getting the right consent for the use of copyrighted lyrics to manage their impact. Future plans may include enhancing content sourcing rules and following intellectual property laws.
- Incident Severity & Response:
  - It involves lawsuits and copyright infringement. The music publishers have responded by completing a lawsuit.

- Identifying Trends:
  - The incident may bring attention to a trend of AI systems using intellectual property without permission, which may end up in more lawsuits. Because this is the start of the music industry's use of AI, incidents like this are going to happen again and again.
- Mitigation & Prevention:
  - Copyright laws must be followed for the prevention, content verification systems must be put in requirement before the launch of the content, and permissions for copyrighted material must be secured to address the effects and stop them from happening again.
- Data Privacy:
  - Intellectual property rights and content usage are important factors in this situation.
- Disclosure:
  - The incident came to our attention because of the music publishers' lawsuit. And there are no disclosure delays mentioned in this incident.
- Accountability:
  - Anthropic is the focus of responsibility concerns as it has been claimed to have violated copyright. The goal of legal action is to solve this issue.
- Key Insights:
  - The primary takeaway is that AI companies must make sure they are following intellectual property laws and that they have the right permissions when deploying AI system that is protected by copyright.
- Recommendations:
  - To prevent incidents, organizations should implement content verification policies, receive permissions for copyrighted material, and educate their teams about intellectual property rights to avoid lawsuits or arguments.

Title/Incident Name: A scammer sells the AI-generated songs of the Frank Ocean. [5]

Date: 15 October 2023

Reported by: Group 5, 6388072 Pimmada Tularak, 6388133 Pitchaya Teerawongpairoj

Date / Period of incident: Wednesday, May 10, 2023

- Activity During the incident:
  - A scammer who lurks in Frank Ocean Discord communities has sold the Frank Ocean songs that were created by AI to 2 victims for \$13,000 (CAD).
- Parties Involved:
  - The parties involved were the scammer, Frank Ocean, the victims, and the Discord administrator.
- Tech Insights:
  - In this incident, the scammer used the AI for audio forgery, which affects the music industry and artists.
- Perpetrator:
  - The scammer used AI to mimic Frank Ocean's voice and generate songs.
- Root Causes:
  - The root cause of this problem, the scammer impersonates AI-generated artist works to defraud others.
- Sources of Exploit:
  - The scammer relies on the moment and vulnerability that the real Frank Ocean implies about his music at the Coachella concert to earn money for the scammer himself. In this case, the Scammer tricked two victims on Discord Frank Ocean Fans into paying him about \$13,000 (CAD).
- Tech Insights:
  - The scammer uses AI to create fake songs of Frank Ocean, which shows that AI can imitate the artist's voice, and can also imitate the style of the song.
- Impact & Consequences:
  - The first impact is financial, there are victims affected by being tricked into buying songs that are not directly from artists for \$13,000 (CAD). Next is the Community Trust, people in the Discord community lost their trust in the server that came from the incident.
- Actions Taken:
  - The solution would be legal action by letting the scammer be properly responsible to the artist and the fraudulent victim by acting under the law. The victims should be supported to get legal advice for compensation from the scammer.
- Effect Management / Future Plans:
  - Managing the effect by improving the content verification before trading on the platform to deal with the impact of preventing potential fraud again in the future.
- Incident Severity & Response:
  - The severity of the incident in this case is the victims suffered from financial losses by the scammer.
- Identify Trends:
  - To make money by tricking people into purchasing fake songs, the scammer uses AI to mimic the voice of Frank Ocean's songs.
- Mitigation & Prevention:
  - Prevention by ensuring the accuracy of the information and copyright before trading to not cause damage that may affect self and others.



- Data Privacy:
  - The ethical related to data privacy is a lack of transparency and accuracy of information, scammers use AI to fake the voice to deceive other artists.
- Disclosure:
  - From this problem, the victims and the Discord community members should receive notification about this incident to find solutions that do not affect the community.
- Accountability:
  - The scammer pleaded guilty and was held accountable for deleting all released AI songs that were unethical. The Discord Administrator has banned scammers from the Discord server.
- Key Insights:
  - This incident makes the awareness of being wary of being scammed by social media, whether importing false information or fraud to others.
- Recommendations:
  - The information should be verified before being posted on the platform to trade. Most importantly, the artist's consent should be obtained for copyright purposes to be ethical for this incident.

Title/Incident Name: Travis Scott's AI-generated music album was removed from YouTube.[6]

Date: 18 October 2023

Reported by: Group 5, 6388072 Pimmada Tularak, 6388133 Pitchaya Teerawongpairoj

Date / Period of incident: Friday, April 28, 2023

- Activity During the incident:
  - The Discord community used AI-generated Travis Scott songs and published them on social media until the Warner Music Group called for their removal.
- Parties Involved:
  - Parties involved Travis Scott, Warner Music Group, The Discord user, and the Discord community.
- Tech Insights:
  - A vulnerability from AI technology was used to generate music that mimics Travis Scott's voice.
- Perpetrator:
  - The Discord user has used AI to generate and publish fake music through social media.
- Root Causes:
  - The Discord user is the root cause of this problem. Many AI tools in the Discord server use famous artists' voices to make cover music and release it on YouTube.
- Sources of Exploit:
  - The Discord user used AI to benefit from streaming music through platforms such as YouTube and Soundcloud.
- Tech Insights:
  - The AI hub on the Discord server is a vulnerability used as a tool to generate fake music from famous artists.
- Impact & Consequences:
  - The consequence that occurs is the financial loss that does not approach record labels and artists, both directly and indirectly.
- Actions Taken:
  - This incident has been action taken by removing AI-generated songs that infringe on copyright. for all platforms.
- Effect Management / Future Plans:
  - The various record labels are aware of copyright. They reported the issue to music streaming platforms to prevent piracy problems.
- Incident Severity & Response:
  - The Discord user deleted all of the copyright Infringement AI-generate songs from the streaming platform under the Warner Music Group's call for accountability.
- Identify Trends:
  - Regarding trends, there is another case related to Travis Scott and AI, where someone uses Travis Scott's AI-generated voice to make music. By using the name "Travisbot" to go viral on the internet without Travis Scott not receiving any benefits or permission.[7]
- Mitigation & Prevention:
  - Prevention by implementing stricter policies on streaming platforms to prevent AI-generated content that harms the interests of others. that affects the interests of others.

- Data Privacy:
  - In this case, Travis Scott was falsified by AI, resulting in a violation of the copyright ethics of audio data.
- Disclosure:
  - Using the AI-generated voice without permission causes the owner of the voice copyright to lose the benefit, but the publisher has the amount of streaming that has been published.
- Accountability:
  - The user who creates and distributes AI's songs copyright infringement to social media is responsible for removing all music due to copyright law by the stricter policies enforced by the music streaming platform.
- Key Insights:
  - This incident makes awareness for the various record labels within the music industry about AI use.
- Recommendations:
  - From this incident should be an algorithm system to analyze and detect the song made by AI. To prevent the dissemination of copyrighted infringement music Including maintaining benefits for the record labels and artists.

## Summary

**Incident 1:** An AI music titled "Heart on My Sleeve" that mimicked Drake and The Weeknd's voice, created by a TikTok user named ghostwriter977, was removed from several music streaming platforms. The incident points out the vulnerability of AI music generators that mimic artists' voices and upload tracks to earn revenue. Drake, The Weeknd, and Universal Music Group were involved, and the song's lyrics affected various artists' reputations. The incident emphasized the need for policies regarding AI music generators and copyright protection on music platforms to prevent similar incidents in the future.

**Incident 2:** Universal Music Group sent letters to Spotify and Apple Music to remove AI music that lacked copyright protection. This incident, which occurred on April 18, 2023, revealed vulnerabilities in AI music generation, with artists' voices being mimicked and songs uploaded to music streaming platforms without copyright protection. The incident emphasized the importance of content verification, legal actions, and education on intellectual property rights to prevent such incidents and their financial and reputational impacts.

**Incident 3:** Universal Music filed the first copyright case involving AI music song lyrics against Anthropic, an AI company that created the chatbot "Claude." The incident occurred on October 19, 2023, and revolved around the unauthorized use of song lyrics for the chatbot. It highlighted the importance of respecting copyright and intellectual property rights in the age of AI, necessitating improvements in content sourcing and legal compliance.

**Incident 4:** A scammer sold AI music songs imitating Frank Ocean to victims for \$13,000 (CAD). The incident took place on May 10, 2023, within Frank Ocean Discord communities. The scammer used AI for audio forgery, affecting the music industry and artists, and the incident underscored the need for verifying information, copyright protection, and trust within online communities.

**Incident 5:** AI music using Travis Scott's voice was removed from YouTube due to copyright infringement. The incident occurred on April 28, 2023, involving a Discord user who used AI to generate and publish fake music, mimicking Travis Scott's voice. It points out the performance of AI music including piracy and copyright issues, necessitating stricter policies on music streaming platforms and awareness within the music industry.

A common thread throughout all the incidents that have been provided is the usage of AI technology in the music industry and the ethical, legal, and financial effects that come with it. The incidents involve the unauthorized use of AI to create music, which causes copyright violations and harm to record labels and artists. Unauthorized use of AI, financial effects, regulation, ethical concerns, data privacy, and education and awareness are the main points of similarity between the incidents.

With all things considered, these incidents emphasize how AI is changing the music industry and point out the necessity of taking proactive steps to protect artists' intellectual property, keep honesty, and keep the faith of the music industry.

	Incident 1	Incident 2	Incident 3	Incident 4	Incident 5
Perpetrators	Ghostwriter977	People who use AI music tools to mimic artists' voice	Anthropic	A scammer	User on Discord
Details	The Universal Music Group took down a fake song called "Heart on My Sleeve" on music streaming platforms.	The Universal Music Group sent an email to Spotify and Apple Music to block AI music on the music streaming platform.	Universal Music sued the AI company for using song lyrics without permission.	A scammer who lurks in Frank Ocean Discord communities has sold the Frank Ocean songs that were created by AI.	The community on Discord uses AI-generate for Travis Scott's songs and publishes them on social media until the Warner Music Group calls to delete them.
Tech Insight	AI music generator tools, Music streaming platforms	AI music generator tools, Music streaming platforms	AI music generator tools, Music streaming platforms	AI music generator tools, Discord	AI music generator tools, Discord
Impact	The song's lyrics affected the artists' reputation, including Justin Bieber, Drake, The Weeknd, Selena Gomez, and 21 Savage.	People who mimic artists' voices may receive income and royalties from fans, which can cause artists to financial losses.	Reputational damage for Anthropic and finance of the music publisher might decrease.	Financial which are not directly to artists for \$13,000 (CAD). And Community in the Discord.	The loss of finances that didn't go directly to labels and artists
Ethics	Artists' voices were mimicked without consent.	Artists' voices were mimicked without consent.	Perpetrators use song lyrics without consent, copyright, and intellectual property.	With a lack of transparency and accuracy of the information, scammers use AI to fake the voice to deceive other artists.	A lack of copyright and consent from artists.

#### **Example Digital Literacy Enhancement for Artists:**

1. Programs for Education: Create specific programs on digital literacy for artists. These could include live sessions, conferences, and online classes on subjects like privacy and security, digital rights awareness, data privacy, and software tools for making music.
2. Resources: Provide artists with access to digital tools and software, and collaborations with tech firms.

#### **Example policies of ethical standards for AI usage in music creation:**

1. Industry Directions: A worldwide standard of guidelines dealing with the ethical application of AI in music. These policies might address matters such as responsible data use, transparency in AI-generated content, attribution, and copyright.
2. Data Privacy: Laws protecting the privacy of the data used to train AI models for music production should be put in place. Make sure that the intellectual property rights of artists are upheld and that their works are not abused or commercialized.
3. Public Awareness: Beginning projects to raise public awareness of AI music and its effects, as well as the ethical issues that surround it.

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