BA Creative Music Production,

Professional Project

Ben Redmond,

Will AI Make Music Producers Obsolete?

April 27th, 2026,

Dr Brian Carty

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Acknowledgements:

I would like to thank my supervisor, Dr Brian Carty for his guidance and support throughout this project and throughout my time in IADT.

I would also like to thank the fifty-one participants who gave their time to take part in the survey and also the three mixing engineers, Vas, Kieran and Josh who gave their time and expertise, without their participation this project would have not been possible.

And lastly, I would like to thank my friends and family for the support they gave me throughout my years in IADT.

This thesis is dedicated to the memory of my two grandmothers, Eileen Carey and Stasia Redmond who believed in me from the beginning and never got to see me finish, I hope I made them proud.

Abstract

This thesis investigates whether artificial intelligence will make music producers obsolete, or whether it will evolve into a tool that enhances creativity and technical workflow. The rapid advancement of AI music generation tools such as Suno and Udio, alongside AI-assisted tools such as *iZotope's Ozone* and *Neutron*, has raised significant concerns in the music industry about the future of human creativity in music production. The field has been explored by a number of researchers, however, the specific questions of how listeners perceive AI-generated music in comparison to human-produced music, and how AI performs under controlled production conditions, remains an area of interest.

A mixed method approached was used, combining practical audio production, listener surveys and controlled AI limitation testing. Fifty-one participants completed a listening comparison evaluating an AI-generated track against a human-produced track, while three experienced engineers assessed AI-assisted and human mixing and mastering. Additionally three tests were conducted to evaluate the capabilities and limitations of Suno, a leading AI music generation tool.

The findings show that while AI-generated music was perceived as technically competitive in terms of quality, it was rated significantly lower in creativity and originality. Enjoyment results were split evenly between both AI and human-produced tracks, and listeners were mostly unreliable at correctly identifying the AI-generated track. AI-assisted mixing and mastering provided reasonable results, although human input remained important. Suno showed prominent limitations in precision, consistency and studio-based control. These findings suggest that AI is not going to replace producers but rather become a functional tool within the production process. The research concludes that human creative input remains essential to the artistic identity of a track, and that the producers who learn to integrate AI into their workflow will be best positioned in the evolving music industry.

1. Introduction

This thesis studies the evolving technology of AI in music production and investigates whether AI will pose a threat and replace producers in the future, or will it become a tool to further assist producers creatively and technically. AI is advancing at a rapid pace, and in today's age, it is important to ask the question, "Will AI Make Music Producers Obsolete?" Tools such as AIVA, Suno and Udio are capable of creating compositions that are becoming increasingly difficult to distinguish from professionally produced tracks. Concerns are rising about the constant improvement of AI technology, and producers are now questioning their role in the music industry.

This study is to highlight the shift AI is making to workflow, creativity and the value of music producers in the modern music industry and whether it is a threat that will lead to substantial job loss and eventually replace music producers or be used as a tool which will help evolve music producers' skills.

The literature review will cover existing research in five key areas: the rise of AI in music production, AI in mixing and mastering, AI as a creative tool vs a human replacement, AI voice modelling, and the broader ethical and industry concerns with AI adoption. The methodology chapter outlines three methods of research which includes an AI vs Human comparison, a Mixing and mastering comparison between AI-assisted mix and master and a human mix and master and three tests to evaluate Suno's limitations. The analysis chapter presents the findings of the tests objectively, supported by listening surveys and direct observation. The discussion chapter reflects on the findings in context of existing literature research and addresses the research questions in a more informed way. The thesis concludes with an overview of the findings and a section which discusses future directions of this research.

2. Literature Review

2.1 The Rise of Artificial Intelligence in Music Production

Over the past few years, Artificial Intelligence has shifted from being an experimental tool to becoming commonplace in the modern music industry and production, being utilised in mixing, mastering, sound design, composition and voice modelling. Since 2022, there has been a significant rise in the use of Artificial Intelligence for the likes of DALL-E, ChatGPT, Suno and Udio, leading AI to go mainstream and begin influencing how producers make music.

With the advancement of AI, it is now capable of producing chord progressions, melodies and full arrangements with a few simple prompts. AI tools such as Udio or Suno can create fully produced tracks at a professional level, giving producers a good starting point or fully finished ideas.

With tools like Neutron and Ozone by *iZotope*, AI has been integrated into the Mixing and Mastering workflow for producers, which allows an AI-assistant to analyse the audio and add EQ, Compression and Tonal balances that best fit the sound. Allowing producers to get technically clean results in a shorter period of time.

In sound design, AI has also been used to create timbres, textures and presets that otherwise would have taken a producer a great amount of time to recreate manually. An example of this would be *Sonic Charge's Synplant 2,* which uses its Genopatch Technology to recreate a perfect match or create variations of a sample, converting the sample into a synthesiser, allowing for customising the envelope (ADSR), modulation and LFO.

Voice modelling has become mainstream recently, with AI being able to clone famous singers' voices or change a vocalist's voice to sound like a famous singer in any style desired.

AI is not only being utilised in production but also in distribution, streaming platforms such as Spotify, Apple Music and Soundcloud use AI for recommendation algorithms to decide what listeners should listen to next, reinforcing that AI is now being used in all aspects of music.

Overall, AI has been shown to be faster, less expensive and allows less experienced producers to produce high-quality music. Since 2022, artificial intelligence has seen rapid growth and widespread implementation across the music industry. AI is no longer a niche tool and has become a central part of modern music production.

2.2 Artificial Intelligence in Mixing and Mastering

Mixing and mastering involves taking individual raw tracks and blending them together to create a polished final track using EQ, compression, panning and other various audio processing. It requires extensive knowledge and years of experience to achieve high-quality results. With artificial Intelligence, mixing and mastering has become a simpler process. AI has been used to improve clarity, balance and cohesion in a song by analysing tracks and applying adjustments automatically.

Vanka et al. highlights how users at different experience levels utilise AI in different ways:

> *"AI mixing tools can simplify the process and provide decent results for amateurs, pro-ams seek precise control and customization options, while professionals desire control and customization options in addition to assistive and collaborative technologies."* (Vanka et al. 2023)

Amateurs tend to use AI to solve technical problems they have yet to understand, using AI to get quick, decent-sounding results. Pro-ams (Professional-Amateurs) use AI to speed up their workflow and as a learning tool but also prefer some creative control and precision. Professionals tend to be more cautious around AI and prefer to use it to do time-consuming and repetitive tasks, such as getting rough levels of a mix or workflow setup, rather than using AI for creative decisions. (Vanka et al. 2023)

Deruty et al. (2022) mentioned that AI tools need to integrate into the artist's existing workflow to be genuinely useful:

> *"AI music technology offers more than just tools for musicians to produce and manipulate sound in order to realize their creative goals more efficiently."* (Deruty et al. 2022)

This research shows that AI is currently more effective as a collaborative tool that enhances workflow rather than as a replacement human creative decision-making. Many engineers and producers want collaborative tools rather than tools that mix an entire track for them. AI offers good starting points and suggestions, although many experienced engineers feel AI lacks artistic understanding, emotion and context.

2.3 AI as a Creative Tool vs. a Human Replacement

Human creativity is built on intention, emotion, experience and self-expression. When a producer makes a production decision, it often reflects taste, artistic meaning and identity. AI, on the other hand, generates idea patterns in datasets rather than emotional intention. It can be created quickly and efficiently but lacks the emotional depth and context behind producing music.

"Among all the considered topics, the problem of expressive music generation seems to be the most challenging, mainly due to its strong connection with creativity, which is generally perceived as a typically human trait" (Mycka and Mandziuk 2024)

Mycka and Mandziuk mention that AI-generated music, however technically proficient, remains lacking in authentic influence, emphasising the gap between algorithmic pattern replication and true artistic expression. This view is consistent with Galuszka's discussion of AI as a co-creative tool.

"AI is viewed as an agent contributing to a distributed human–computer co-creativity and extending human capabilities, rather than a replacement for human creativity." (Gioti 2021, as cited in Galuszka 2024)

Because AI generates ideas without emotional intention, Producers still shape the meaning of a track. They decide the artistic choices, the emotional narrative and how the final track should sound. Many researchers argue that AI is better as a collaborative tool as the producer can offer context, emotional depth and cultural understanding that AI algorithms cannot replicate. Although AI can speed up workflow and provide new ideas, the final artistic identity of a song relies on human interpretation.

The impact of listener perception and knowledge of AI authorship on musical preference is also a growing area of academic study. *Shank et al. (2023)* researched into what they described as "AI composer bias":

"Listeners tend to like music less when they think, (or are told), that it was composed by an AI." (Shank et al. 2023, as cited in Ansani et al. 2025)

Ansani et al. (2025) expanded upon this study to audiovisual music performance where participants were shown classical piano performances where the audio was identical in both conditions, one showing a human pianist and one showing the piano playing autonomously, via the use of AI. Participants consistently rated the human performance as more likable, engaging and of higher quality although the audio was identical.

This suggested that the value listeners put on human creativity in music extends past what they can detect by ear alone, and that the disclosure of AI authorship has an interesting effect on how music is perceived and evaluated.

Figueiredo et al. conducted further research, researching the difficulty listeners face is distinguishing AI-generated music from human-produced music. A large-scale study that looked into the perceived humanness of AI-generated music found that when presented with pairs of tracks at random. Listeners were unable to differentiate AI-generated music from Human made tracks.

"When pairs are random, listeners cannot differentiate AIM [AI Music] from human-made songs, i.e., they are no better than random guessing." (Figueiredo et al. 2025)

This study also found that prior musical experience and a familiarity with AI music increased the likelihood of correct identification, suggesting that the ability to detect AI authorship is a skill rather than an intuitive one. These findings raise an interesting question about creativity and authenticity in music, and about what it means for a track to be perceived as “human” in a time where AI-generated music is becoming increasingly indistinguishable from human-produced tracks.

2.4 AI Voice Modelling

AI voice modelling has been the most controversial and widely discussed form of AI-generated music. The recent advancement in AI voice modelling has allowed users to recreate the vocals of famous artists with great precision and quality. Galuszka (2024) explores this by analysing how users use these tools to create remixes, covers, mashups and even "What If" versions of these songs using the voices of dead or retired artists:

“attempts to use generative AI to create covers of famous hits sung in the voices of artists long dead” (Galuszka 2024)

These covers have become very popular online with platforms like TikTok, YouTube and Instagram, where listeners show huge interest in how well AI can replicate iconic voices. A concerning finding is that listeners have started to prefer the AI versions.

> *"the enthusiastic response to these productions makes one wonder how the relationship between listeners and AI-generated music will evolve"* (Galuszka 2024)

This new trend has raised complex questions about authenticity, creativity and copyright. Although many listeners enjoy the entertainment value these covers bring, industry professionals have shown concern over these recreations and how they may blur the boundaries between genuine performance and algorithmic imitation. Galuszka's work has also shown that listeners are not really concerned with the ethical issues and that listeners may see AI voice modelling as a form of fan-made creativity, like covers or remixes.

From a legal standpoint, *Borza (2025)* warns of substantial risks introduced by AI-generated vocal models. The paper cites Nicolas Dauban of IRCAM Amplify, who warns that:

> *"the models of music generation achieved by AI have progressed to such a level that it will soon be impossible to discern them from real artists, using only our ears"* (Dauban, as cited in Borza 2025)

Borza emphasises that copyright compliance and ethical use of AI-generated audio must be priorities for both developers and users of these tools. This concern is particularly big for artists whose voice is a core element of their professional identity.

2.5 AI Adoption, Ethical Concerns, and Industry Impact

As AI advances, many producers and artists have shown concerns about how Artificial Intelligence will affect their careers and income stability. As mentioned in **Section 2.2**, the three user groups identified by Vanka et al. **(amateurs, pro-ams, and professionals)** showed different comfort levels with AI automation, with professionals consistently preferring AI that supports rather than displaces human decision-making.

Torres (2024) discusses how AI is already influencing multiple areas of the music industry from production tasks to music marketing and artist discovery through algorithmic recommendation systems. Which is sparking concerns about the economic impact on music professionals. As *Novikova (2024)* mentions:

"AI is predicted to take over some of the creative jobs leading to music professionals suffer financially or being forced to seek employment in other industries" (Novikova 2024)

This economic pressure raises legitimate concerns about income stability for professionals who depend on music production as their primary livelihood.

As previously mentioned in **Section 2.4**, the replication of vocals using AI unconsented, introduces legal risks for performers, particularly where copyright and consent frameworks remain underdeveloped.

This literature review establishes that AI tools are now embedded in the music industry and production, but important questions remain unanswered: How do producers at different experience levels integrate AI into their creative workflows? What role do they expect AI to play, and where do they draw boundaries around creative control? How are legal and ethical concerns navigated in practice? These questions form the foundation for investigation in the following sections.

3. Methodology

3.1 Research Design

This study uses a mixed-methods design, combining practical audio production, listening surveys and data collection. The aim of this research is to measure listener preference, perceived quality, creativity, and authenticity, and to examine whether listeners can correctly identify AI-generated tracks compared to human-produced tracks.

Both qualitative data and quantitative data were collected. Qualitative data includes feedback and observations by both the general listeners and professional engineers, while quantitative data includes the preferences gathered and listener ratings through surveys. Additionally, practical testing of the AI tools was used to analyse performance in controlled situations.

This approach allowed for a balanced evaluation of AI in music production, combining listener perception with technical analysis.

3.2 Practical Methodology

3.2.1 AI-generated vs Human-produced Track

The first method involved creating a Human-Produced track and comparing it to an AI-generated track. Both tracks were created with the same prompt, variables such as BPM, Genre and Key were kept the same ensuring consistency while allowing for creative freedom.

These tracks were compared amongst:

- **General Listeners**
- **Experienced Producers/Mixing Engineers**

This method was used to research the differences between:

- **Quality**
- **Creativity**
- **Overall preference**

This method aims to explore whether AI-generated music is perceived as equal, superior, or inferior to human-produced music in terms of creativity and quality.

Participants were asked to listen to both tracks and provide feedback using an online survey. The survey asked questions based off preference and whether participants could identify the AI-generated track and the human-produced track.

To avoid bias, the identity of how each track was created was not disclosed until the end of the survey.

3.2.2 Mixing & Mastering (AI-assisted Vs Human)

The second method involved using an **unmixed human-produced track** and Mix and Master the track in two ways:

1. **Human-Made Mix and Master** where the producer mixed and mastered the track manually without using AI-Assisted plugins.
2. **AI-Assisted Mix and Master** where AI used plugins such as *Neutron 5* and *Ozone 12* which have a dedicated AI assistant built in to mix and master the track automatically.

To avoid bias, Any effects without an AI tool built into it, such as Sidechain, Delay, Reverbs, etc., were kept identical for both tracks to avoid breaking the mix.

It should be noted that Neutron 5 produced an unsatisfactory volume balance across multiple attempts during the mixing process. A manual volume adjustment was made to ensure the survey remained focused on the mixing capabilities rather than an obvious technical failure. While this decision was made to ensure fairness, it represents another limitation of this method, as the AI wasn't entirely unassisted.

Additionally, for the Mastering aspect of this method, The human-mixed track was used for both mastering tests to avoid preference over mix rather than the master.

These tracks were then compared amongst:

- **Experienced Producers/ Mixing engineers** (10+ years' experience)

The aim for this method was to investigate which the Experienced Producers/Mixing Engineers will prefer based on:

- **Quality**
- **Clarity**
- **Balance**
- **Presence of artifacts or errors**

This method was used to research the quality of both AI-assisted Mix and Master and Human-Mix and Master, investigating whether AI has better mix and mastering skills or will Artificial Intelligence present discrepancies/artifacts compare to the Human-Mix and Master.

3.2.3. AI Limitation Testing

The third method involved identifying Suno's limitations. Unlike the other methods, this method did not involve a comparison with human-produced tracks, but evaluates Suno's performance in controlled tests.

Suno was chosen as the primary AI music generation tool for the study due to it having more advanced capabilities than Udio in terms of quality, output consistency and features.

In addition, Suno features Suno Studio which allowed for further analysis of a studio-based editing environment beyond generation and provided insight into a level of control previously only available for producers using a Digital Audio Workstation (DAW).

The inclusion of Suno Studio allowed for further testing into creative and technical limitations of AI in music production.

Three tests were conducted:

Consistency Test:

The consistency test evaluates whether Suno generates consistent results when provided with the same prompt multiple times.

Each output was scored based on:

- BPM Accuracy
- Key Accuracy
- Structural similarity
- Sound consistency

- Overall Similarity

This test was designed to determine whether AI can generate reliable and repeatable results, which is important in professional workflows.

Precision Test:

The precision test evaluates how accurately Suno follows specific instructions.

Prompts were made including parameters such as:

- BPM Accuracy
- Genre Accuracy
- Key Accuracy
- Rhythm / Drum Pattern
- Instrumentation
- Tempo Change
- Key Change

Each generated track was evaluated based on how well it followed these instructions. For each parameter, a prompt was created which was then used to generate 10 outputs and evaluated based off how often Suno followed the specific parameter. This test was designed to identify whether AI can do specific requests or tasks that a producer can do without difficulty.

Suno Studio Test

The final test evaluates the level of control available in Suno studio.

This involved testing features such as:

- Arrangement Editing
- Effects
- Sound Isolation
- Workflow Flexibility
- Sound Modification
- MIDI Editing
- Mix Control
- Automation Control

Each feature was evaluated based on the level of control, usability and limitations. This test was designed to test whether Suno can perform the same level control as a standard digital audio workstation (DAW).

3.3 Survey / Listener Feedback

A survey took place between two listener groups:

- Experienced Producers/Mixing Engineers
- General Listeners

For **Method 3.2.1 (AI vs Human),** Participants listened to two tracks and answered questions based on creativity, quality and preference. This survey was surveyed to general listeners and experienced producers.

For **Method 3.2.2 (Mixing and Mastering),** Participants listened to four tracks, two tracks which were a comparison of AI and Human mixes and two tracks that were AI and Human masters. These questions were answered based on quality and preference. This survey was surveyed to Experienced Producers/Mixing Engineers Only.

The surveys was created using **Microsoft Forms**, and the results of the survey were transferred to **Microsoft Excel** for analysis**.**

As mention in *3.2.1*, Participants were not told origins of each method was until the survey was concluded.

3.4 Data Analysis

All data collected from the survey and listening tests was analysed using both **quantitative** and **qualitative** analysis. Quantitative data was participants ratings towards creativity, authenticity preference and quality which was transferred to *Microsoft Excel. Qualitative data includes the feedback and observations collected by participants.* This data was organised into charts and tables to pinpoint patterns between both listener groups.

Percentages was calculated separately between each research method, this allowed for a more direct comparison for each method.

3.5 Credibility

To ensure the research is reliable and credible, three measures were taken:

First measure, all methods had controlled variables such as BPM, Key, Genre and arrangement to ensure preference is not decided based on structure of the tracks rather than the production.

Second measure, two separate groups were used: **General Listeners** and **Experiences Producers/Mixing Engineers** which helped gather credible data and results. Using experienced and inexperienced listeners reduced bias and improved the validity of the research.

Third measure, the use of **industry-standard** and **high-quality** AI tools such as *Suno*, *iZotope's Neutron 5* and *Ozone 12,* Only the best results of the chosen tools will be used to reduce further bias, this will be ensured by using the most recent and advanced versions of the tools mentioned.

3.6 Ethical Considerations

All participants took part in the survey based on a voluntary basis and could withdraw from the survey at any time. Participants were provided with a consent form, and no personal information was collected ensuring all participants were anonymous.

To avoid bias participant were not told which tracks were AI-generated and which were Human-produced until after the survey is completed. After the survey, participants were informed the purpose of the survey and the research.

All collected data was solely used for academic purposes and was stored securely in accordance with GDPR guidelines and the ethical guidelines.

4. Analysis

4.1 Method 1 – AI-generated vs Human-produced Track

A total of 51 participant completed the listening survey. Participants were asked to evaluate both tracks in terms of creativity, quality, originality, enjoyment and the likelihood to listen to the tracks again. The identity of how the each track was created was not disclosed till the end of the survey. Track A was the AI-generated track and Track B was the human-produced track.

4.1.1 Creativity

66.7% *(34/51)* of participants found the human-produced track more creative, while 33.3% *(17/51)* found the AI-generated track more creative. This shows a clear preference for human creativity among participants.

4.1.2 Quality

52.9% (27/51) perceived the AI-generated to be higher in quality, compared to 23.5% *(12/51)* who perceived the human-produced track as higher in quality. 23.5% *(12/51)* found no difference in quality. This finding was interesting as it suggests that AI-generated music can compete against human-produced music in terms of quality, despite the fact is was rated lower in creativity.

4.1.3 Originality

72.5% *(37/51)* found the human track more original and innovative compared to 19.6% *(10/51)* for the AI track, while 7.8% *(4/51)* found neither more original or innovative. These results had the largest gap between both tracks, this suggests that there is a link between creativity and originality, and that originality may be the technical gap between AI-generated and Human-produced music.

4.1.4 Enjoyment

49% *(25/51)* of participants found the AI track more enjoyable and 49% *(25/51)* found the human track more enjoyable, showing an even split. One participant reported no difference. This result was a interesting finding, despite perceptions of lower creativity and originality, the AI track was still found equally as enjoyable as the human-produced track.

4.1.5 Likelihood of Listening Again

Results were also nearly equal, with 49% *(25/51)* choosing the human track and 47.1% *(24/51)* choosing the AI track, with two participants selecting neither. This further supports that listener enjoyment is not impacted by whether or not the track is AI-generated or human-produced.

4.1.6 AI Identification

When participants were asked which track they believed was AI-generated, 47.1% *(24/51)* correctly identified Track A as the AI track. 33.3% *(17/51)* incorrectly identified Track B (Human-produced) as the AI-generated track, and 19.6% were unsure. This result shows that listeners were not able to reliably distinguish between AI-generated and human-produced music. Also to mention, with the percentage of correct identifications under 50% may be the result of random chance. However, of the 51 participants, 23/51 (45.1%) had musical experience. (Hobbyist, intermediate producer, Advanced producer), of the 23/51, 12/23 (52.2%) correctly identified the AI track, although a small difference than 47.1%, it could suggest prior musical knowledge may marginally help identify AI-generated music.

4.1.7 Post-Reveal Preference

After revealing the origins of each track, *15 out of 51* participants changed their preference. 73% *(11/15)* of those participants switched preference to the human-produced track after the reveal, while 27% *(4/15)* switched back to preferring the AI-generated track. This may suggest that the knowledge of AI-generated tracks influences listener perception.

4.1.8 Impact on Attitudes Towards AI in Music

47.1% *(24/51)* reported no change in their feeling towards AI in music. 37.3% *(19/51)* informed feeling more negative towards AI in music, while 15.7% *(8/51)* reported feeling more positive about AI in music. This indicates that listening to AI-generated music while not knowing the origins and then learning the truth has a negative or neutral effect on participants outlooks on AI in music.

Table 1 - Method 1 Survey Results

Category:	AI Track (Track A)	Human Track (Track B)	No difference/ Neither
Creativity:	33.3% *(17/51)*	66.7% *(34/51)*	N/A
Quality:	52.9% *(27/51)*	23.5% *(12/51)*	23.5% *(12/51)*
Originality:	19.6% *(10/51)*	72.5% *(37/51)*	7.8% *(4/51)*
Enjoyment:	49% *(25/51)*	49% *(25/51)*	2% *(1/51)*
Listen Again:	47.1% *(24/51)*	49% *(25/51)*	3.9% *(2/51)*
AI Identification:	47.1% *(24/51) Correct*	33.3% *(17/51) Incorrect*	19.6% *(10/51) Unsure*
Post-Reveal Preference:	27% *(4/15)*	73% *(11/15)*	N/A

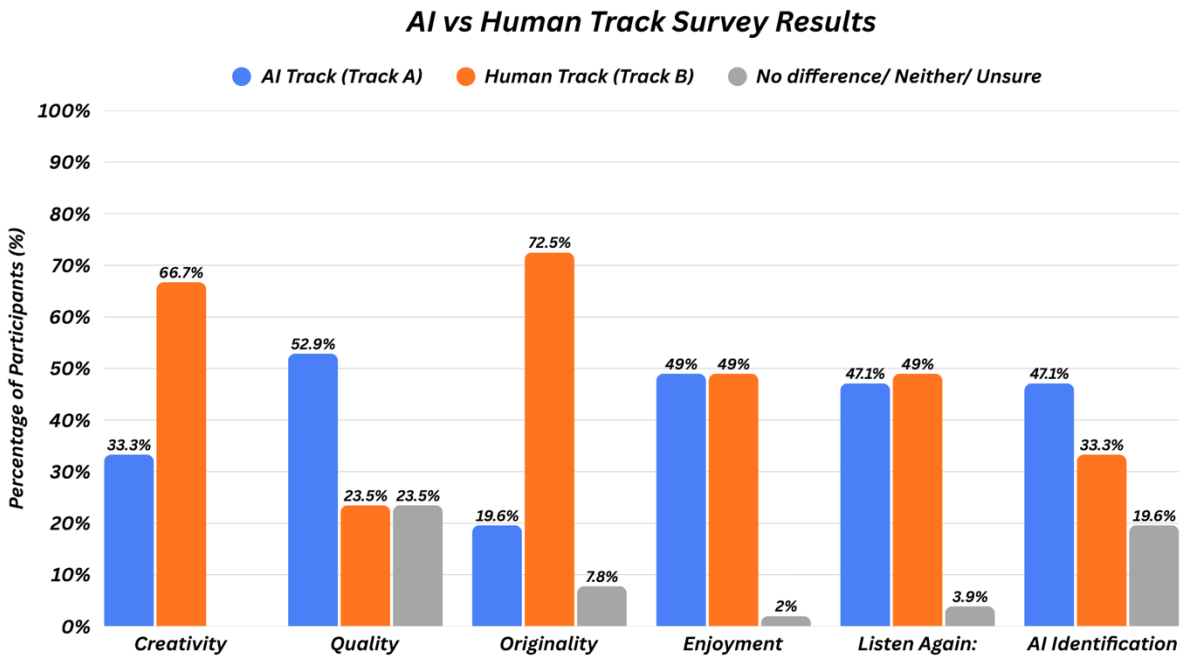

Figure 1 – AI vs Human Survey results

Source: Author's own research

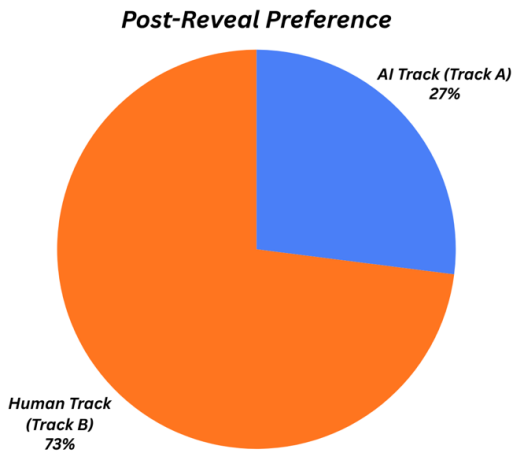

Figure 2 - Post-Reveal Preference Results.

Source: Author's own research. .

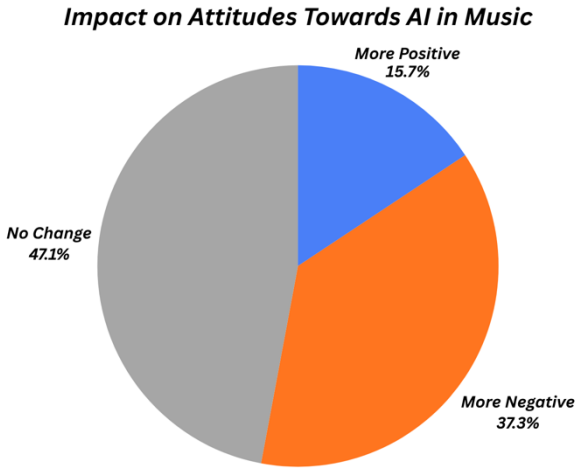

Figure 3 – Impact on Attitudes Towards AI in Music Results.

Source: Author's own research.

4.2 Method 2 – Mixing & Mastering (AI-assisted Vs Human)

Three experienced Mixing and Mastering Engineers/ Producers with 10+ years' of experience participated in the survey. Similar to section *4.1,* the participants were not informed about the origin of the mix and masters until the end of the survey. Two things to consider is the limitations of this method is the small sample size and that one of the participants was used as a pilot for the survey and the survey was updated as per feedback, the results should be interpreted accordingly.

4.2.1 Mix Preference

Two out of the three participants preferred the human mix overall. The participant that preferred the AI-assisted mix rated it higher in volume balance and dynamic control. One of the participants noted that the AI-assisted mix sounded more generic and resembled a preset application, lacking the emphasis to detail which was present in the human mix. The other participant noted, although rating the AI-assisted mix having stronger dynamic control, the human mix had better clarity, dynamics and stereo image. As mentioned in section *3.2.2,* a manual volume adjustment was made to the AI mix prior to the survey, this was an additional limitation when evaluating the results.

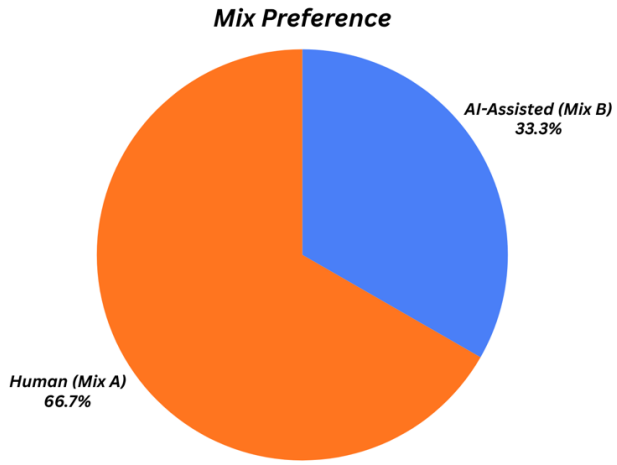

Figure 4 – Mix Preference Results.

Source: Author's own research.

4.2.2 Master Preference

Two of the three participants preferred the AI-assisted master overall, one of which, noted that the Human master sounded slightly distorted which could be down to human error. The other participant noted that the AI-assisted mix removed some of the *"muddiness"* in the track. However, the participant also mentioned the AI-assisted mix removed a majority of frequency information. One of the three participants preferred the Human master, and noted that the AI-assisted master compressed the track too heavily, pushing quieter sections up and reducing dynamic contrast which is undesirable in the genre, while the human mix made more of an effort to keep the dynamic difference intact and trimmed low end in smaller section as expected for the genre, although the participant did note that the highs could have been tamed.

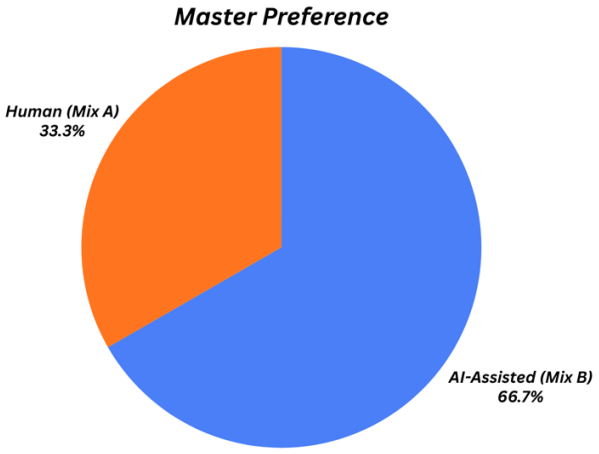

Figure 5 – Master Preference Results.

Source: Author's own research.

4.2.3 AI Identification

Two of the three participants could tell one of the mixes were AI-assisted, with one mentioning it sounded more like a preset application. For the master, Two participants could tell one of the masters were AI-assisted. Although one participant commented that they did not believe it was possible to identify which mix and master was AI-assisted, implying the difference was subtler and more difficult to detect.

4.3 Method 3 – Suno Limitation Test

4.3.1 Consistency Test

The consistency test evaluated five generated tracks from the same prompt against a reference across five categories: Descriptions displayed in *Table 2*

Category:	Description
BPM Accuracy	Does the track follow the same or similar bpm as the reference track?
Tonal Accuracy	Does the track follow the same key or tonal similarity as the reference track?
Structural Similarity	Does the track follow a similar structure as the reference track?
Sound Consistency	Does the track follow a similar sound selection and timbre or used in a similar way as the reference track?
Overall Similarity	Does the track sound like another version of the reference track?

Table 2 – Category Descriptions

The results have been displayed in *Table 3*

Track ID	BPM Accuracy	Tonal Similarity	Structural Similarity	Sound Consistency	Overall Similarity
Track 1	5	4	2	2	3
Track 2	3	4	3	2	3
Track 3	5	4	5	2	3
Track 4	5	5	2	3	4
Track 5	5	3	1	1	2

Table 3 - Consistency test results (1 = Very Inaccurate, 5 = Very accurate)

BPM and tonal similarity were mostly consistent, with most of the tracks scoring 4 or 5. Structural similarity and sound consistency were noticeably more inaccurate, with structural similarity and sound consistency mostly scoring between 1 to 3, The overall similarity score was mostly between 2 to 4, indicating moderate but unreliable consistency. It should be noted that 12 tracks were generated previous to the test. However, the reference tracks did not

follow the prompted instructions and could not be used as a fair reference leading those attempts being discarded.

4.3.2 Precision Test

The precision test evaluated Suno's ability to follow specific instructions across seven elements. The results are displayed in *Table 4*.

Element:	Followed Correctly?:	Notes:
BPM Accuracy	*No*	*Consistency drifted from +2 to -2 BPM regardless of prompt*
Genre Accuracy	*Yes*	*Genre followed reliably across tests*
Key Accuracy	*Yes*	*Key instructions followed correctly*
Rhythm / Drum Pattern	*No*	*Ignored across 10 generations*
instrumentation	*Yes*	*Specific instruments were included correctly*
Tempo Change	*No*	*Ignored across multiple attempts*
Key Change	*No*	*Ignored across multiple attempts*

Table 4 – Precision test results

Suno followed genre, key and instrumentation reliably. BPM consistently drifted off slightly from the requested BPM in every test. Rhythm / drum pattern instructions were ignored even after 10 generations. Tempo and key changes were ignored throughout all generations, even with simplified prompts that focused solely on key and tempo changes.

4.3.3 Suno Studio Test

The Suno Studio test evaluated the level of control available within Suno's editing environment between eight features. Results are displayed in *Table 5*

Feature	Level of Control	Limitations:
Arrangement Editing	Moderate	Very Basic arrangement editing, (fades, cuts)
Effects	Very Limited	Effects can only be removed via use of credits and added via prompts
Sound Isolation	Moderate	Stems have artifacts which could be likely due to AI generation or stem separation post-generation
Workflow Flexibility	Very Limited	Workflow is based off prompt generation and interface is very basic.
Sound Modification	Very limited	Sound can only be modified via prompts
MIDI Editing	None	Cannot edit melody, chords or musical structure. MIDI can be downloaded but not imported or created
Mix Control	Very limited	Only one EQ per sound and volume can't be automated
Automation Control	None	All automation is fixed into the audio cannot be adjusted manually.

Table 5 – Suno Studio Test Results

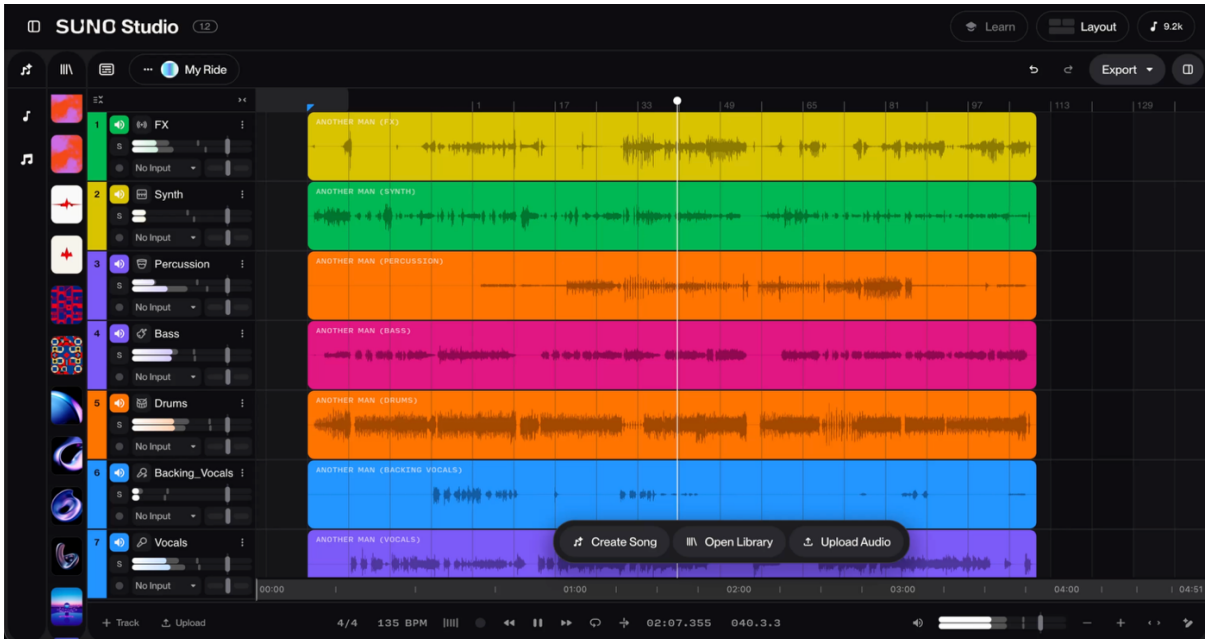

Figure 6 – Suno Studio Interface

Source: Screenshot by Author

Suno Studio had significantly less control than a standard DAW. No MIDI editing or automation features available. Effects could not be added manually without prompt-based generation. Suno have marketed Suno Studio as combining "traditional DAW functionality

with AI-powered music creation” and offering “complete creative control”. The results of this test do not support this claim.

4.3.4 Suno Version 5.5

Following the completion of testing, Suno released version 5.5. A brief retest was conducted and here are the findings:

- Improvements in Sound and Structure consistency
- Downgrade in BPM and Key accuracy
- Increased load times
- Improvements in genre accuracy
- Slight improvement in rhythm accuracy.
- Persisting inability to do BPM and Key changes
- No change in Instrumentation
- No change in Suno Studio

5. Discussion

5.1 Introduction

The findings provided from the three methods of research requires some nuance when looking at AI's capabilities and limitations in music production. This chapter reflects on these results and interprets them in context to current literature, and uses them to directly address the research question: *"Will AI Make Music Producers Obsolete?"* The discussion is organised around these three methods, followed by a general understanding of how the findings collectively inform the research question. The limitations will also be acknowledged throughout.

5.2 Interpretation of Method 1 – AI-generated vs Human-produced Track

The results of the listening survey offered some of the most interesting findings of this study. The human-produced track was rated more in terms of creativity and originality by participants, with 66.7% for creativity and 72.5% for originality. This aligns with the argument made by *Mycka and Mandziuk (2024),* who describes music generation as AI's biggest challenge, mentioning that creativity is mostly perceived as typically a human trait. The listener data from this study supports that view, even when listeners could not identify the AI-generated track, they still perceived the human track as more creative and original.

One of the most surprising findings was that the AI-generated track was rated higher in quality by 52.9% of participants compared to just 23.5% for the human track. This is a significant result that suggests that AI tools such as Suno has reached a level of technical proficiency that is noticeable to general listeners. If AI can already be perceived as higher quality by majority of listeners, it could possibly have an impact on areas where technical quality rather than artistic creativity is the primary consideration. *Novikova (2024)* highlights this concern that AI is predicted to take over creative jobs, leading music professionals to suffer financially, a threat that appears most immediate in lower-stakes commercial contexts such as background music and functional audio, where technical quality rather than artistic originality is the primary consideration and AI is already competitive.

The enjoyment result was a perfectly even 49% split, which is arguably the most thought-provoking finding in the entire study. It shows that despite the perception of lower creativity and originality, the AI-generated track was enjoyed equally as much as the human one. This

suggests that creativity and enjoyment are not the same thing in the listener's experience, even when it lacks the creative depth of the human-produced tracks. The nuance is important when considering the research question as it demonstrates that AI-generated music is neither inferior nor superior but simply occupies a different but increasingly competitive space.

The AI identification results further complicate the picture. With only 47.1% of participants correctly identifying the AI track, when under 50% it is fair to assume random chance was involved. It's clear that listeners cannot reliably distinguish between AI-generated and human-produced music. This directly connects to *Figueiredo et al's (2025)* findings, who found when listeners were presented with pairs of random AI and human tracks, they performed at no better than chance level. These results suggest that AI-generated music has reached a level where the average listener cannot detect it, reliably. However, there was a modest difference when comparing to participants with musical knowledge, 23/51 participants identified as having music experience, 12 correctly identified the AI track giving a correct identification rate of 52.2%, compared to 47.1% across all participants. This is a similar finding to what *Figueiredo et al.'s* (2025) study claims, where he mentions that practical musical experience and a familiarity with AI music increased chances of correct AI-generated music identification, suggesting that the ability to correctly identify AI is a skill rather than an intuitive one.

The post-reveal findings showed some meaningful results, of those who changed their preference after the disclosure of the origins of both tracks, the majority switched to favouring the human track. This suggests that knowledge of AI authorship does influence perception and preference, and that remains a cultural value placed on human creativity in music that transcend the listening experience itself. This connects with the findings of *Ansani et al. (2025)*, whose study evaluated that knowing a performance was attributed to AI was sufficient to lower aesthetic judgment even when audio was identical, indicating that authorship knowledge shapes how listeners judge music independently from what they actually hear.

5.3 Interpretation of Method 2 – Mixing and Mastering (AI-assisted Vs Human)

The mixing and mastering results must be interpreted with caution due to the small sample size of three participants, One of the participants was used as a pilot for the survey and the manual volume balance adjustment that was done to ensure a fair test. However, the

qualitative feedback provided by these experienced professionals gives great insight that numbers alone cannot capture.

Two out of the three participants preferred the human mix overall, with comments about the AI mix feeling generic and resembling a preset application. This connects with *Vanka et al. (2023)*, who notes that professionals tend to be cautious with AI, preferring it for repetitive tasks rather than artistic decisions. The feedback suggests that even if AI can achieve a technically competent mix, experienced engineers detect a lack of attention to detail and that separates AI processing from skilled human engineering.

The Neutron 5 volume balance issue as described in *section 3.2.2,* which required a manual adjustment before the survey ,which itself is an important finding. The fact that AI tool by a well-respected professional audio software company such as *iZotope*, failed to produce an acceptable volume balance across multiple attempts suggests that AI-assisted mixing is not yet a hands-off process, hence the *"assisted"* wording. Although this has never been *iZotope's* claim. *iZotope* has marketed Neutron 5 as "*a great starting point for your mix*", admittedly the mix assistant did provide a decent starting point, leaving very little volume adjustments needed to achieve an acceptable result. This supports *Deruty et al.'s (2022*) position that AI should enhance rather than replace decision-making, as this test demonstrated that human oversight remains necessary even when using advanced AI tools. The limitation should be considered when interpreting the overall mix preference results, as the AI mix shown to the participants benefited from human correction.

The mastering results told a different story to the mix. Two out of the three participants preferred the AI-assisted master, with comments mentioning improved tonal balance and removal of muddiness, although one of the participant mentioned that the AI-master removed some frequency information, which is safe to assume the participant was talking about the high-end. Only one participant preferred the human master, pointing out that the AI-assisted master was over-compresses and lost dynamic contrast. This result may indicate that mastering, being a more technical and a less creative process, is an area where AI tools are more closely matched with human engineers. This also connects back to *Vanka et al.'s (2023)* observation that professionals are more comfortable with AI handling repetitive or technical tasks.

5.4 Interpretation of Method 3 – Suno Limitation Test

The results of the Suno limitation test paint a clear picture of where AI music generation currently stands in relation to professional production workflows. Suno performed well in broad categories such as genre, key and instrumentation, but consistently failed at more precise instructions. BPM accuracy drifted in every single test, drum patterns ignored across 10 generations, tempo and key changes could not be achieved despite repeated attempts with simplified prompts.

These failures are important in context to the research question. Precision, consistency and technical control are fundamental to professional music production. A producer working on a specific brief like a film, an advertisement or a client project couldn't afford the level of unpredictability that Suno demonstrates throughout this testing. This supports the arguments made by *Mycka and Mandziuk (2024)* that expressive and precise music generation remains AI's biggest challenge, and reinforces implication that AI is currently more suited to low-stakes contexts than to the precise and demanding requirements of professional production environments.

The Suno Studio evaluation revealed an equally substantial gap between Suno's marketing claims and the reality of its editing functionality. With no MIDI editing, no automation control and an effects system completely reliant on prompts, Suno Studio cannot currently be considered a viable alternative to a standard DAW. This is especially relevant because Suno explicitly markets itself as offering "complete creative control" comparable to traditional DAW functionality, a claim that this study directly contradicts. The fact that Suno itself contradicts their claims by acknowledging that users should "continue editing in your DAW" after exporting, while also claiming DAW-level functionality. This highlights the gap where AI music tools currently are and where they are positioned in their marketing.

The release of Suno version 5.5 shortly after concluding all tests shows the rapid iteration of these tools and how quickly the landscape is changing. While the new update brought improvements in areas such as genre and rhythm accuracy, the core limitations of tempo and key changes and Suno Studio control still remained. This suggests that although AI music generation is advancing rapidly, the gap between AI capabilities and the precision required in professional production contexts is not as rapid as public perception might suggest.

5.5 Addressing the Research Question

Taking the findings of all three of the methods, this study gives a clear but also nuanced answer to the research question: Will AI make music producers obsolete?

The findings suggest that the simple answer is no, at least for the foreseeable future and not in the way the question implies. AI currently struggles to compete with producers in terms of precision, creative intent, emotional depth or contextual awareness. Listeners recognise this, even when they can't identify AI-generated music, rating it lower in creativity and originality, and changing their preference towards human-produced tracks once they know which one is which.

Yet, the finding also makes it clear that the picture is slightly more complicated than a simple dismissal of AI as a threat. AI-generated music was perceived as higher in quality by a majority of participants, and enjoyment was evenly split. These are not results of a technology failing to compete. In areas of functional audio, background music and early-stage idea generation, AI is already capable enough to pose as a genuine economic challenge to producers working in those areas, as *Novikova (2024)* warns, noting that AI is predicted to take over creative jobs and may force some music professionals to seek employment elsewhere.

What the findings best support is the framing established by *Deruty et al. (2022)* and *Mycka and Mandziuk (2024),* AI is best understood not as a replacement for human creativity but as a tool that extends and accelerates it. The producers who use these tools effectively, using them for rapid idea generation, technical processing and workflow efficiency while maintaining creative control, are likely to be better positioned than those who either ignore AI entirely or rely on it to make creative decisions it is not yet capable of making well.

5.6 Limitations

As mentioned earlier in this study, several limitations should be acknowledged. The major one is the small sample size for ***Method 2***, with only three experienced engineers completing the survey. This makes it difficult to draw broad conclusions from those results, and a larger sample of experienced professionals would provide more reliable results.

The manual volume adjustment required for the AI-assisted mixing test before the survey also introduces a methodological complication. While the decision was made in good faith to make

sure it was a fair test, it meant that the AI mix was not entirely AI-assisted, and this should be factored into any interpretations of those results.

The participants for the AI-generated vs Human comparison survey was predominantly young and music literate, which may not fully represent the general listener population. A broader demographic sample could produce different results, particularly in categories like quality perception and AI identification.

Finally, the rapid advancement of AI tool during this study, for example, the release of Suno 5.5 means that's some specific findings of Suno's capabilities may become outdated very quickly, but the findings should be understood as a snapshot of Suno's capabilities at a particular moment in time.

6. Conclusion

6.1 Overview of Findings

This study set out to investigate whether Artificial Intelligence will make music producers obsolete, using a mixed methods approach that combined listener surveys, an expert evaluation of AI-assisted mixing and mastering and a controlled limitation test of Suno.

The listening comparison survey found that while the AI-generated track was perceived as higher quality by majority of participants, the human track was still rated higher in terms of creativity and originality. Enjoyment was evenly split, and a large amount of listeners were unable to identify which track was AI-generated, with a correct identification rate of just 47.1%, which could be down to random chance. Following the reveal of the origins of each track, participants changed their preference, shifting towards the human track, suggesting that AI authorship influences listener perception.

The mixing and mastering evaluation found that experienced engineers generally preferred the human mix, although preferring the AI-assisted master, with feedback emphasising things from lack of detail to loss of frequency information. The Neutron 5 volume balance adjustment reinforced that AI-assisted mixing is not yet fully autonomous process.

The *Suno* limitation test revealed consistent weakness in BPM accuracy, drum pattern precision and the inability to perform tempo and key changes. Suno Studio was found to offer significantly less control than a standard DAW, contradicting Suno's own marketing claims. These limitations collectively indicate that AI music generation, while advancing rapidly, is not yet capable of performing the precise, contextually aware work that professional music production demands.

6.2 Conclusion

AI will not make music producers obsolete. The findings of this study consistently point to a more nuanced reality. AI is fast, accessible and great for generating ideas, but it lacks the creative intention, emotional depth and technical precision that define professional music production. Listeners recognise this distinction, even when they cannot articulate it.

What is clear from this research is that AI is becoming an increasingly useful tool within producers workflow. It can generate ideas rapidly, assist with technical processing and lower the barrier to entry for less experienced producers. For those in commercial spaces such as background music, functional audio, royalty-free content, the economic pressure from AI is already real. The most accurate answer to the research question is not that AI will replace producers, but that the role of producers is evolving, and those who understand and engage with AI as a tool will be the ones who shape what the role looks like next. The evidence in this study suggests that human creativity still leads. Maintaining that creative edge will be the responsibility of the producer.

6.3 Future Directions

Several directions exist for future research in this area. A larger and more demographically diverse sample for both the listening survey and mixing and mastering survey would provide more robust and generalisable results. Repeating the AI limitation tests with different tools such as Udio or AIVA and comparing their performance against Suno would also provide a more comprehensive picture of the current state of AI music generation.

As Suno and similar AI tools continue to release updates rapidly, testing that tracks improvements in AI capability over time would be a valuable contribution to the field. Finally, research examining the attitudes and workflows of professional producers in more depth, through interviews or case studies, would complement the listener data gathered in the study and provide a more complete picture of how AI is being integrated into the real-world production environments.

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Appendices:

Appendix A – AI-generated vs Human-produced Survey Questions:

Listening Comparison Survey

In this survey, you will be asked to listen to 30 second clips of two tracks and answer questions based on your listening experience. There are no right or wrong answers. Please answer honestly based on what you hear.
The survey will only take 5 minutes of your time to complete.

Participation in this survey is completely voluntary.
You may withdraw from the survey at any time without providing a reason.
No personally identifiable information will be collected, and all responses will remain anonymous.
The data collected will be used solely for academic research purposes as part of a final-year Creative Music Production thesis.
Some information about the origin of the music used in this survey will be revealed after the listening task is completed to avoid bias.

1

Do you understand the above and consent to take part in this survey?
Yes
No

2

What is your age range?
Under 18
18-24
25-34
35-44
45+

3

What is your experience with music?
General Listener
Music Hobbyist
Intermediate Producer

Advanced Producer

4

How often do you listen to music?

Very frequently

Frequently

Occasionally

Rarely

Never

Listening Test

You will now be shown Track A and Track B. Please listen to both clips before answering the questions. You may replay the tracks if needed.

Creative & Quality Evaluation

5

Which track did you find more creative? (In terms of the musical idea and sound design)

Track A

Track B

6

Why did you find this track more creative? (Optional)

Enter your answer

7

Which track sounds higher in quality?

Track A

Track B

No difference8

Why did you find this track higher in quality? (Optional)

Enter your answer

Originality:

9

Which track did you find more original and innovative?

Track A

Track B

Neither

Engagement

10

Which track did you enjoy more?

Track A

Track B

No difference

11

Which track are you more likely to listen to again?

Track A

Track B

Neither

Post-Listening Disclosure

One of the tracks you listened to was AI-Generated and the other was Human-Made

12

Which of the tracks do you think was AI-generated?

Track A

Track B

Unsure

The Reveal

13

Track A was the AI-generated track. Has your opinion changed?

Yes

No

Maybe

14

Knowing this information, Which track do you prefer?

Track A (AI-Generated)

Track B (Human-Made)

15

Could you tell Track A was AI-generated?

Yes

No

Unsure

16

How has this test changed how you feel about AI in music?

More Positive

More negative

No change

End of Survey

Thank you for your time and participation!

This content is neither created nor endorsed by Microsoft. The data you submit will be sent to the form owner.

Microsoft Forms

Appendix B – Mixing and Mastering (AI-assisted Vs Human) Survey Questions:

Mixing and Mastering Listener Feedback

In this survey, you will be asked to listen to two tracks comparing Mixing and two tracks comparing Mastering.

Answer questions based on your listening

experience. There are no right or wrong answers.

Please answer honestly based on what you hear.

Feel free to listen back for replayability.

It is recommended to use headphones or studio monitors for this listening

survey. The survey should only take 5 - 10 mins to complete. It is not necessary

to listen to the full duration of the tracks, just the first 60 - 90 seconds.

Participation in this survey is completely voluntary.

You may withdraw from the survey at any time without providing a reason.

No personally identifiable information will be collected, and all responses will remain anonymous.

The data collected will be used solely for academic research purposes as part of a final-year Creative Music Production thesis.

Some information about the origin of the music used in this survey will be revealed after the listening task is completed to avoid bias.

* Required

1

Do you understand the above and consent to take part in this survey?

Yes

No

2

Mixing and Mastering Experience:

5-10 Years

10-15 Years

20+ Years

3

Primary Role:

Mixing Engineer

Mastering Engineer

Music Producer

Lecturer

Other

4

Listening Environment:

Studio Headphones

Studio Monitors

Both

Other

Mix Comparison

You will now listen to two Mix versions (Unmastered).

A OneDrive folder link was sent if you wish to download the audio files for higher-quality audio.

You are also free to have the YouTube Videos open in a separate tab for replayability

Mix Preference

7

Which Mix did you prefer?

Mix A

Mix B

8

How strong is your preference?

Slight

Moderate

Strong

Neutral

9

Mix Comparison

Mix A Mix B

Which version
has a better mix
balance?

Which version
has a better
stereo image?

Which version
has a better
clarity?

Which version
has better
dynamic
control?

Mastering Comparison

You will now listen to the mastered versions of the same track

A OneDrive folder link was sent if you wish to download the audio files for higher-quality audio.

You are also free to have the YouTube Videos open in a separate tab for Replayability

12

Which Master did you prefer?

Master A

Master B

13

Why? (Optional)

Enter your answer

14

Master Comparison

Master A Master B

Which version
sounded more
tonally
balanced?

Which version
sounded more
professionally
mastered?

AI Identification

Now that you have completed the comparison portion of the survey, You will now be informed that each version of the comparison tests included a Human-Mix & Mastered track and a AI-assisted-Mix & Mastered track.

AI Identification (Mix)

15

Could you tell that one of the mixes were AI-assisted?

Yes

No

Maybe

16

Why? (Optional)

Enter your answer

AI Identification (Master)

17

Could you tell that one of the masters were AI-assisted?

Yes

No

Maybe

18

Why?

Enter your answer

The Reveal

Now that the survey is coming to an end, here's the reveal:

Mix A - Human

Mix B - AI-Assisted

Master A - AI-Assisted

Master B - Human

19

Knowing this knowledge, has your thoughts changed?

Yes

No

End of Survey

Thank you for your time and expertise.

Appendix C – AI-generated vs Human-produced Survey Results:

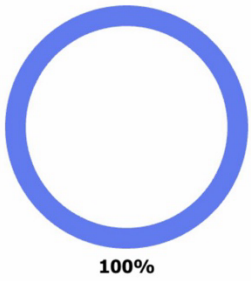
Responses Overview

Active

Responses	Average Time	Duration
51	03:13	74 Days

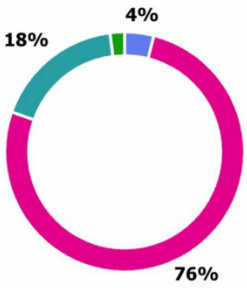
1. Do you understand the above and consent to take part in this survey?

Yes	51
No	0



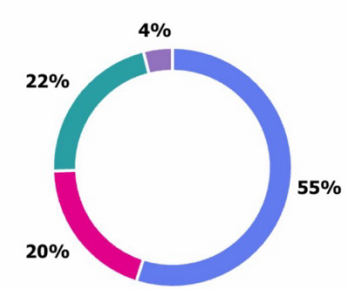
2. What is your age range?

Under 18	2
18-24	39
25-34	9
35-44	0
45+	1



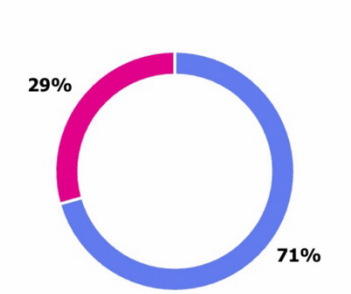
3. What is your experience with music?

General Listener	28
Music Hobbyist	10
Intermediate Producer	11
Advanced Producer	2



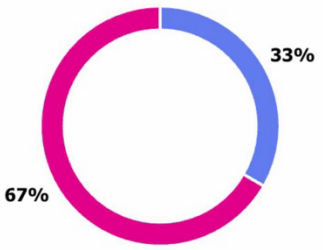
4. How often do you listen to music?

Very frequently	36
Frequently	15
Occasionally	0
Rarely	0
Never	0



5. Which track did you find more creative? *(In terms of the musical idea and sound design)*

Track A	17
Track B	34



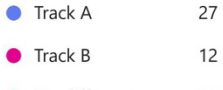
6. Why did you find this track more creative? (Optional)

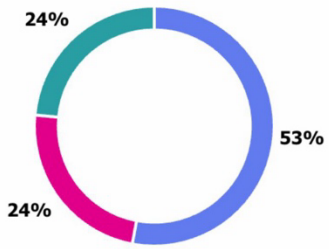
31
Responses

Latest Responses
"More instrumentation"
...

11 respondents (35%) answered sound for this question.

7. Which track sounds higher in quality?





8. Why did you find this track higher in quality? (Optional)

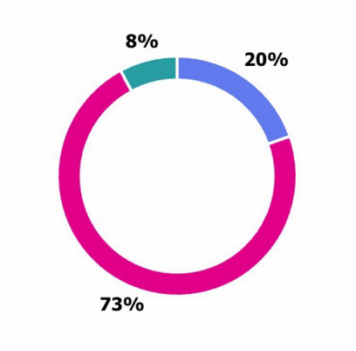
18
Responses

Latest Responses
"There was alot of hiss and missing clarity in track A"
...

3 respondents (17%) answered easier for this question.

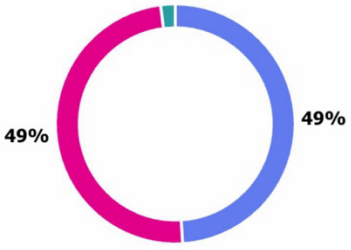
9. Which track did you find more original and innovative?

Track A	10
Track B	37
Neither	4



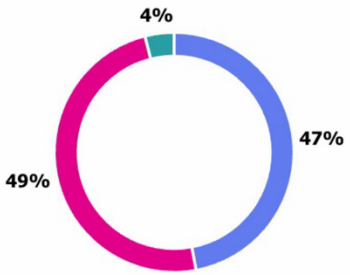
10. Which track did you enjoy more?

Track A	25
Track B	25
No difference	1



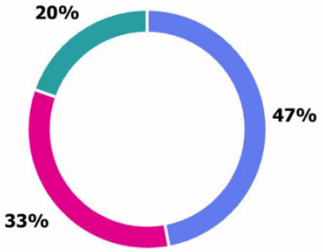
11. Which track are you more likely to listen to again?

Track A	24
Track B	25
Neither	2



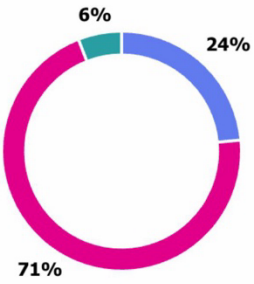
12. Which of the tracks do you think was AI-generated?

Track A	24
Track B	17
Unsure	10



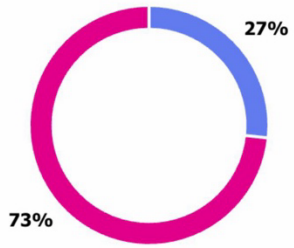
13. Track A was the AI-generated track. Has your opinion changed?

Yes	12
No	36
Maybe	3



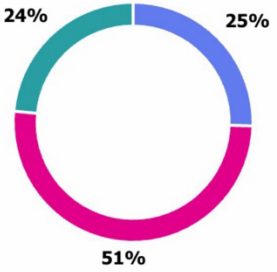
14. Knowing this information, Which track do you prefer?

Track A (AI-Generated)	4
Track B (Human-Made)	11



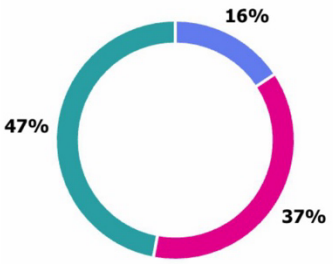
15. Could you tell Track A was AI-generated?

Yes	13
No	26
Unsure	12



16. How has this test changed how you feel about AI in music?

More Positive	8
More negative	19
No change	24



Appendix D – Mixing and Mastering (AI-assisted Vs Human) Survey Results:

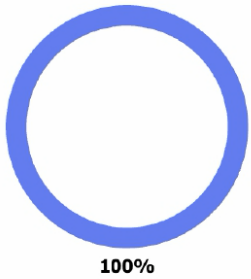
Responses Overview

Active

Responses	Average Time	Duration
3	57:16	75 Days

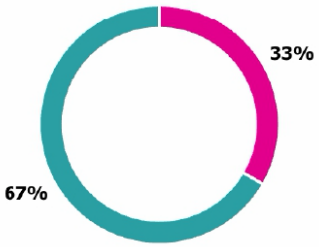
1. Do you understand the above and consent to take part in this survey?

Yes	3
No	0



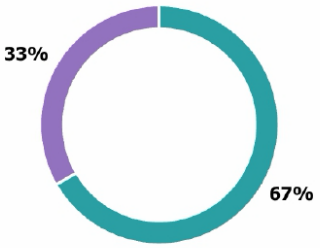
2. Mixing and Mastering Experience:

5-10 Years	0
10-15 Years	1
20+ Years	2



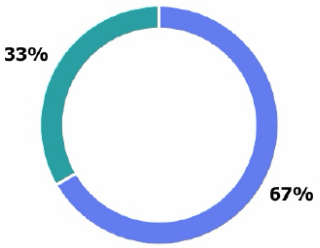
3. Primary Role:

Mixing Engineer	0
Mastering Engineer	0
Music Producer	2
Lecturer	1
Other	0



4. Listening Environment:

Studio Headphones	2
Studio Monitors	0
Both	1
Other	0

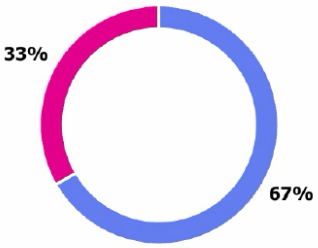


5. Mix A

6. Mix B

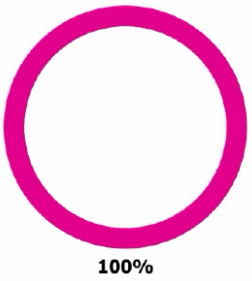
7. Which Mix did you prefer?

Mix A	2
Mix B	1

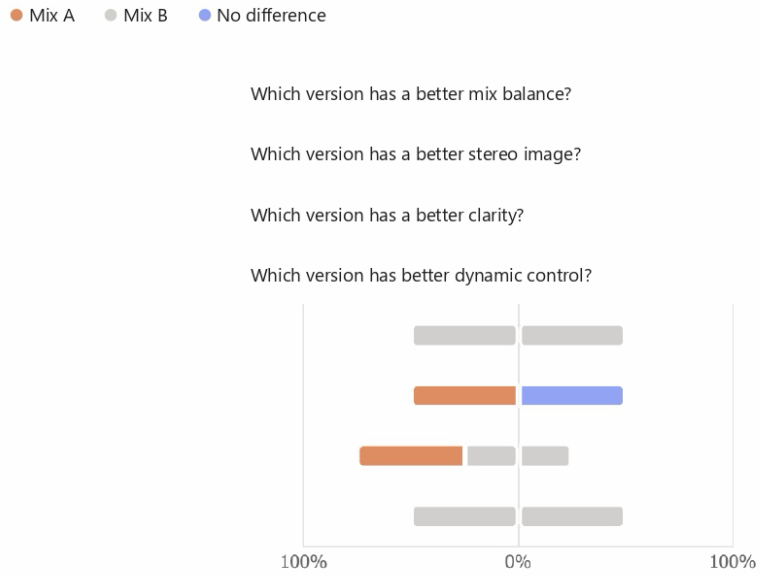


8. How strong is your preference?

Slight	0
Moderate	2
Strong	0
Neutral	0



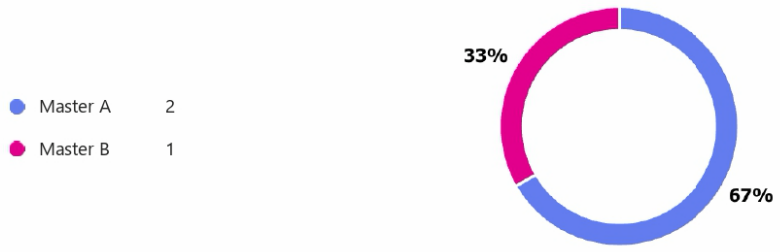
9. Mix Comparison



10. Master A

11. Master B

12. Which Master did you prefer?

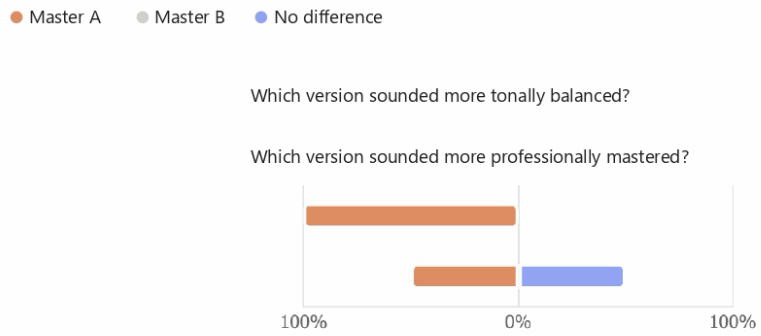


13. Why? (Optional)

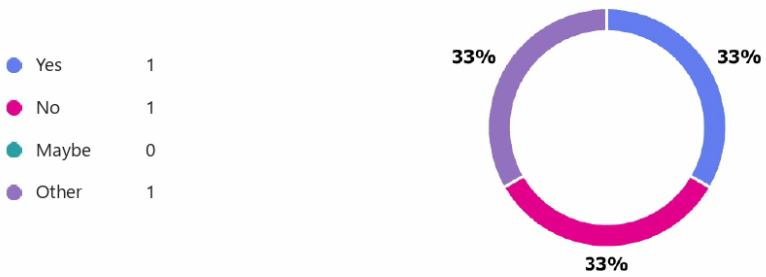
2
Responses

Latest Responses
"Better dynamics (not dynamic control), clarity, and stereo image. ... "
"MasterB: Nice balance, the dynamics between sections are kept (... "

14. Master Comparison



15. Could you tell that one of the mixes were AI-assisted?



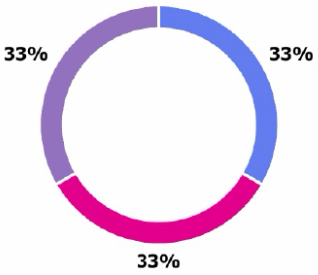
16. Why? (Optional)

2
Responses

Latest Responses
"I don't think that would be possible to identify."
"It sounds more generic, like a preset application. It doesn't seem ... "

17. Could you tell that one of the masters were AI-assisted?

Yes	1
No	1
Maybe	0
Other	1



18. Why?

3
Responses

Latest Responses

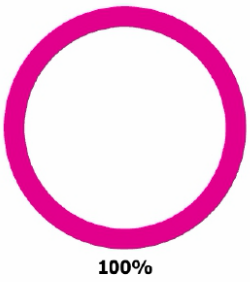
"Again, I don't think that would be possible to identify."

"The AI master has removed the muddiness from the track, huma... "

"It seems like it changed the mix more dramatically, it pushed mo... "

19. Knowing this knowledge, has your thoughts changed?

Yes	0
No	2



Appendix E– Prompts Used

Method 1: AI-generated vs Human produced - Future house track in A# minor at 136 BPM with a strong 4-on-the-floor groove

Consistency Test - Future House track at 128 BPM in A Minor key with a groovy rhythm and club-ready production.

Precision Test-

BPM Accuracy	UK garage track at 150 BPM in A minor with a 2-step rhythm
Genre Accuracy	House track at 132 BPM in A minor with a 2-step rhythm
Key Accuracy	UK garage track at 132 BPM in E minor with a 2-step rhythm
Rhythm / Drum Pattern	UK garage track at 132 BPM in A minor with a 4-On-The-Floor rhythm
instrumentation	*UK garage track at 132 BPM in A minor with a Rhodes piano and Vocal chops*
Tempo Change	UK garage track at 132 BPM that increases to 140 BPM for the Drop in A minor with a 2-step rhythm
Key Change	*UK garage track at 132 BPM in A minor changing to A# Minor during the drop with a 2-step rhythm*

Appendix F – Suno Limitation Test

Consistency Test:

Prompt: Create a Future House track at 128 BPM in A Minor key with a groovy rhythm and club-ready production

1 = Very inaccurate / very different

2 = Quite inaccurate / low similarity

3 = Moderate similarity

4 = Mostly accurate / mostly similar

5 = Very accurate / highly similar

The consistency test will be used to test whether the tracks created after the reference sound like a version of the reference or sounds similar or nothing alike

BPM Accuracy = does the track follow the same or similar bpm as the reference track

Tonal Accuracy = does the track follow the same key or tonal similarity as the reference track

Structural Similarity = Does the track have the same/similar structure as the reference track? (Intro, Buildup, Drop. Etc)

Sound Consistency = Does the track have similar sound selection and timbre and used in a similar way as the refence track? (Bass, Lead, Chords, Drums, Vocal)

Track ID	*BPM Accuracy*	*Tonal Similarity*	*Structural Similarity*	*Sound Consistency*	*Overall Similarity*
Track 1	5	4	2	2	3
Track 2	3	4	3	2	3
Track 3	5	4	5	2	3
Track 4	5	5	2	3	4
Track 5	5	3	1	1	2

Observations:

Suno tended to be mostly accurate although it took two previous attempts (12 tracks) as the reference track veer off from the requested prompt and could not be used as a fair comparison, these attempts were discarded as the initial idea was for the tracks to be created directly after the reference track to ensure a fair test.

Reference (I'm Gonna Love Ya):

BPM: 128

Key: A Minor

Structure: Intro *(16 Bars)* – Buildup *(7 Bars)* – Pre-Drop *(1 Bar)*– Drop *(16 Bars)*- Break *(8 Bars)*– Buildup *(7 Bars)* – Pre-Drop *(1 Bar)* – Drop (8 Bars) - Outro *(8 Bars)*

Sound: Female Vocal***,*** Metallic Organ Bass, Piano, Punchy Drums, Sawtooth Lead, Old-school Future House

Length: 2:19

Track 1(Back 2 U):

BPM: 128

Key: A Minor

Structure: Intro *(8.5 Bars)* – Buildup *(7 Bars)* Pre-Drop *(1 Bar)* – Drop *(8 Bars)*– Buildup *(7 Bars)* – Pre-Drop *(1 Bar)* – Drop *(16 Bars)*– Break *(16 Bars)*– Buildup *(7 Bars)* - Pre Drop *(5 Bar)* – Buildup *(3 Bars)* – Pre-Drop *(1 Bar)* - Drop/Outro *(8 Bars)*

Sound: Female Vocal, Harmonic 7th Bass, Punchy Drums, Club Style Future house

Length: 2:47

Track 2 (Move Your Body):

BPM: 126

Key: A Minor

Structure: Intro (*8.5 Bars)* – Pre-Drop (8 Bars) – Buildup (12 Bars)- Drop (24 Bars) – Break (12 Bars) – Buildup (4 Bars) – Pre-Drop (2 Bars) – Drop (16 Bars) – Outro Drop (8 Bars)

Sound: Male and Female Vocal, Piano, Deep Organ Bass, Vocal Lead, Slap House bass, Punchy Drums, Piano/Slap House Style

Length: 3:06

Track 3 (Kiss and Tell):

BPM: 128

Key: A Minor

Structure: Intro *(16.5 Bars)* - Buildup *(7 Bars)* – Pre-Drop *(1 Bar*) – Drop *(16 Bars*) – Break *(8 Bars)* - Buildup *(7 Bars)* – Pre-Drop *(1 Bar)* – Drop *(8 Bars)* – Outro Drop *(8.5 Bars)*

Sound: Female Vocal, Vocal Chops, Brassy Future House Lead, Piano, Low Subby Bass, Punchy Drums, Modern Future House

Length: 2:18

Track 4 (Forget You):

BPM: 128

Key: A Minor

Structure: Intro *(20.5 Bars)* – Build-up *(11.5 bars)* – Pre-Drop *(0.5 Bars)* – Drop *(24 Bars)* – Break *(4 Bars)* – Build-up *(4 Bars)* – Pre-Drop *(2 Bars)* – Drop/Outro *(7 Bars)*

Sound: Female Vocal, Piano, Spacy, Reese bass, Organ, Deep Bass, Punchy Drums, Piano House Style

Length: 2:20

Track 5 (Shake It):

BPM: 128

Key: A Minor

Structure: Intro *(8 Bars)* – Buildup *(10 Bars)* – Pre-Drop *(2 Bars)* – Drop (16 Bars) – Break (8 Bars) – Buildup (8 Bars) – Pre-Drop (2 Bars) – Drop (24 Bars) - Buildup (8 Bars) – Pre- Drop (2 Bars) – Drop (8 Bars) – Outro (8.5 Bars)

Sound: Male Vocal, Vibrato Saw Lead, Melbourne Bounce Bass, Punchy Drums, Melbourne Bounce

Length: 3:15

Stress/Precision Test:

Suno produces two tracks for each prompt and both tracks will be assessed

Prompt: UK garage track at 132 BPM in A minor with a 2-step rhythm

Element:	***Prompt:***	***What Suno Produced:***	***Followed Correctly?:***	***Notes:***
BPM Accuracy	UK garage track at 150 BPM in A minor with a 2-step rhythm	UK garage track at 132 BPM in A# minor with a 2-step rhythm	***No, BPM and Key was ignored***	***Suno produced two tracks for this prompt, one in which it ignored the genre and BPM and made a Jazz track at 99 BPM***
Genre Accuracy	House track at 132 BPM in A minor with a 2-step rhythm	UK garage track at 133 BPM in A minor with a 2-step rhythm	***Yes, BPM veered Slightly to 133 bpm instead of 132 BPM***	***Suno produced two tracks for this prompt but the second track ignored the drum rhythm that was instructed***
Key Accuracy	UK garage track at 132 BPM in E minor with a 2-step rhythm	UK garage track at 133 & 134 BPM in E minor with a 2-step rhythm	***Yes, both tracks created followed the instructed key***	***BPM veered off again to 134 and 133***
Rhythm / Drum Pattern	UK garage track at 132 BPM in A minor with a 4-	UK garage track at 133 and 134	***No, Rhythm ignored Aswell as Key for one***	***10 separate generations were made and***

	On-The-Floor rhythm	BPM in A and D minor with a 2-step rhythm	***of the tracks and BPM veered off for both tracks.***	***it ignored rhythm for all generations***
instrumentation	***UK garage track at 132 BPM in A minor with a Rhodes piano and Vocal chops***	***UK garage track at 133 and 134 BPM in A minor with a Rhodes piano and Vocal chops***	***Yes, Both tracks featured the Rhodes and Vocal Chops***	***BPM yet again veered off to 133 and 134***
Tempo Change	**UK garage track at 132 BPM that increases to 140 BPM for the Drop in A minor with a 2-step rhythm**	**UK garage track at 136 and 137 BPM in A minor with a 2-step rhythm**	***No, Suno ignored the request to increase tempo and stayed at a consistent tempo***	***Suno was given two chances with a less detailed prompt only asking for the tempo change and still failed to do so***
Key Change	***UK garage track at 132 BPM in A minor changing to A# Minor during the drop with a 2-step rhythm***	***UK garage track at 133 and 134 BPM in A# Minor with a 2-step rhythm***	***No, Both track ignored instructions and stayed in A# Minor and BPM veered off again from 133 and 134***	***Suno was given 3 chances reducing the prompt down (6 tracks) and failed to do instructions for all chances***

Suno Studio testing:

Feature	*Level of Control*	*Notes*	*Limitations*
Arrangement Editing	Moderate	Clips can be duplicated	Very Basic arrangement editing, (fades, cuts)
Effects	Very Limited	No available FX rack to add and remove effects	FX can only be removed via use of credits and added via prompts
Sound Isolation	Moderate	Soloing and stems available	Stems have artifacts which could be likely due to AI generation or stem separation post-generation
Workflow Flexibility	Very Limited	Audio can be recorded and added and tempo and time signatures can be changed	Workflow is based off prompt generation and interface is very basic.
Sound Modification	Very limited	Sound modification is very limited (transpose and tempo changes)	Sound can only be modified via prompts
MIDI Editing	None	No MIDI editing feature available	Cannot edit melody, chords or musical structure, MIDI can be downloaded but not imported or created
Mix Control	Very limited	Very basic mix control, no ability to add more EQ's	Only one EQ per sound and volume can't be automated
Automation Control	None	No automation features available	All automation is fixed into the audio cannot be adjusted manually.

Observations:

The Suno website claims it is a *"web-based generative audio workstation that combines traditional DAW functionality with AI-powered music creation"* that gives *"complete creative control".*

After testing, it appears Suno leaves much to be desired, the editing functionality is less similar to a DAW and more similar to the likes of audacity, very basic and doesn't give full control over every element. A large majority of the "creative control" is AI prompt based which is of course Suno's deliberate intention but a lot of very common and basic features that are standard for DAW's are unavailable.

The likes of stem separation, audio and MIDI export can be useful features and on the Suno website they do mention *"Easily export stems as audio and MIDI. Continue editing in your DAW"* which contradicts their first claim of being a traditional daw with AI capabilities which many DAW's have already started to implement such as stem separation and De-verb, although Suno does give the ability for more advanced stem separation.

Suno Version 5.5:

After concluding these tests, Suno released a new version, Suno 5.5, which features more expressive voice models, enhanced fidelity with fewer artifacts and voicing modes.

I decided to test the new version of Suno and here are my findings:

- Improvements in Sound and Structure consistency
- Downgrade in BPM and Key accuracy
- No changes in Suno Studio
- Twice as long load times (Which could be a good thing)
- Improvements in Genre, Rhythm accuracy
- For Rhythm accuracy, I used the same prompt for the stress test, only 3 out of 10 tracks had the instructed drum pattern. Which is a slight improvement
- Still can't do Key changes
- Still can't do BPM changes, but Suno seems to disguise drum pattern changes as increased BPM (2-step -> 4-On-The-Floor)
- No change in Instrumentation