

# Write me a random song!?

## MAKING AND LEARNING MUSIC IN THE AGE OF ARTIFICIAL INTELLIGENCE

Tobias Rotsch

**The author explores the role of AI in the creative processes of music-making and encourages us to use the discussion about AI to confront fears and develop a reflective approach.**

### MUSIC IN THE AGE OF AI

AI has permeated the everyday lives of music makers as well as the classrooms of schoolchildren. Current megatrends include platforms like *Udio*<sup>1</sup> and *Suno*<sup>2</sup>, which generate complete songs based on prompts. Developments such as text-to-video/MiniMax (Polomski, 2024) from the Chinese company HailuoAI<sup>3</sup> highlight the rapid advancement of the technology. These changes are so significant that we can only speculate on their impact. New rules and recommendations also emerge frequently, such as laws based on the EU Artificial Intelligence Act (European Commission, 2023). Specific jobs, as always in the music business, could be replaced (e.g., studio musicians, background music producers). The prospect of an AGI (Artificial General Intelligence) takes on almost religious traits for some, while for others it triggers fear and rejection (Mahani, 2023; Kreye, 2024). Scientists worldwide agree that an AGI could exist in around 10 to 20 years (Dilmegani, 2024). How will it then be used by artists, creators and audiences? What is the current status? And are concerns that AI “may soon replace artists and musicians” (Bonini & Magaudda, 2024, p. 122) justified?

### AI IN MUSIC PRACTICE

Joy<sup>4,5</sup>, who completed her degree in pop music in summer 2024, recently participated in a songwriting camp in Mannheim. There, young professionals and newcomers work in various typical roles. While the lyricists write lyrics, trackers produce musical patterns such as beats and small piano- or guitar-based compositions, and topliners create melodies. Joy enjoys working with different colleagues on her lyrics. “That way, I could benefit from more ideas coming from multiple minds. When I write alone, it takes much longer to come up with fresh ideas.” Since the advent of *ChatGPT*<sup>6</sup> and other Large Language Models (LLMs), Joy has also been using AI to suggest words, rhymes or different alternatives for verses and hooks. The outputs of various LLMs differ in content and language style and can be adjusted using prompts. You can have the language model write from the perspective of a child, the US president, a history teacher, or any other person you define in detail. “I mainly use it for inspiration and to get ideas. I also don’t use the entire output of *ChatGPT* for my text. It’s more like a virtual work partner who brings in fresh input.” When asked if AI could replace her colleagues as creative partners, she laughs: “Absolutely not! I would miss the fun and those special personal moments – spending all that time together, laughing. We’re in the same boat. How would that work with just a laptop?” The songwriting

example illustrates how naturally AI is being integrated into creative processes while highlighting its limitations. It also demonstrates the new kind of creative potential opening up through prompting.

AI tools have been established in music production and composition for several years, particularly in mixing and mastering (*LANDR*<sup>7</sup>, *Ozone*<sup>8</sup>). If you look at the history of pop music, technological advancement has always been a key driver of change in pop music, from the Beatles to Kraftwerk to hip hop and bedroom producers. For example, the expansion of digital audio workstations (DAWs) or software such as *ReCycle* in the 1990s, enabled new design variability with beat slices, creating trends (Alexander, 2009). Innovations such as pitch (and other) envelopes<sup>9</sup> in *Ableton Live* led to the emergence of entire music genres like dubstep<sup>10</sup> in the 2000s. Such technological developments continually generate new options for the music of the future. But can AI be the driving force behind something completely new?

*Limitations in terms of inspiration, innovation and artistic radiance*

### INNOVATION THROUGH AI

AI can already do a lot: it composes and creates complete songs (*Suno*, *Udio*, *Aiva*<sup>11</sup>) and simulates voices

indistinguishable from the original (*Audimee*<sup>12</sup>, *Controlla Voice*<sup>13</sup>). However, the machine relies entirely on the input it is fed, resulting in stereotypical AI outputs limited in terms of inspiration, innovation and artistic radiance. The innovation lies in the way HI (human intelligence) collaborates with AI. For instance, Beethoven's 10th Symphony was completed by AI, which provided infinite variations, allowing humans to choose, adjust, or create from the results (Fulde, 2021). Tools like *MelodyStudio*<sup>14</sup> offer similar flexibility. Other developments enable choir generated from my voice in real time (Arnal, 2023) or allow recordings to be broken down into individual tracks for reassembly (*Moises*<sup>15</sup>, *Lalal*<sup>16</sup>). In music production, initial developments such as *Wavtool*<sup>17</sup> or *CoProducer*<sup>18</sup> generate patterns and loops (matching existing material) that can be integrated into the ongoing production process. For example, AI can generate suitable bass tracks and drumbeats based on existing piano patterns, which can be changed manually directly in the user interface.<sup>19</sup>

## AI IN CREATIVE PROCESSES – IN MUSIC LESSONS AND PRACTICE

In music lessons, AI offers “a wide range of opportunities to act as a medium for personalisation, inspiration, exploration or diversification of knowledge and thus to make learning processes at the interface between man and machine tangible and thus come alive” (Bade, 2023, p. 48). These can be seen in areas of application such as songwriting, producing, research, tutoring & feedback, music history (for example through virtual interviews or textual time travel) and making music with AI-modified accompaniment (Rotsch, 2023). At this point, I would like to highlight the potential for creative design processes.

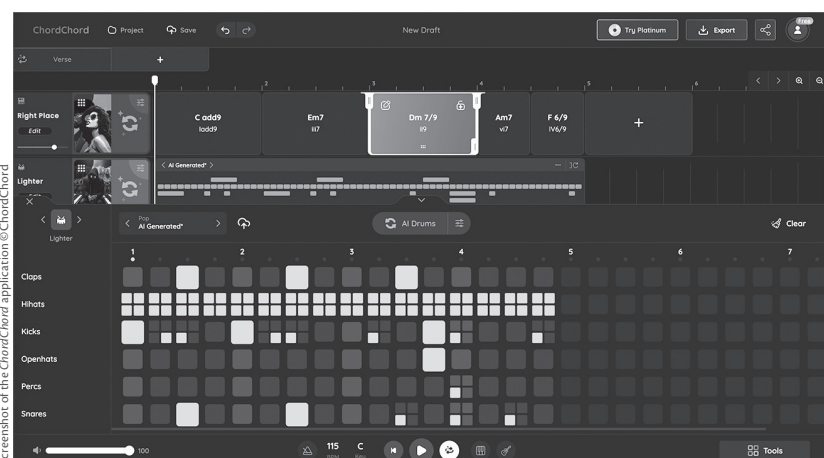
### *Unsatisfied need for control and creative self-determination*

When students produce music using their own and generated patterns (or create content using LLMs) and become creative in a constant decision-making process between generating, self-creating, changing and discarding in a social and individualised learning environment, “AI does not replace a conventional production environment here, but rather expands the scope for experience and action and the associated usage and action skill” (Rotsch & Werner, 2025). It is often observed that students quickly become bored with purely generated results without further input. This may be related to the fact that there is no feeling of success that arises when realising one's own ideas out of a “need for control and creative self-determination” (Rotsch & Werner, 2025). Ownership of the idea is crucial for the enthusiasm that arises, one's own design processes become “prototypes for the experience of self-determination” and “ideally, the actors make the object their own” (Freytag, 2015). Pupils in heterogeneous class groups, in particular those with little musical practice or general creative experience, are thus given access to a world of music-aesthetic experiences. The use of AI can encourage creative

processes, even if AI is not the designer. In initial lesson designs on the topic of songwriting using the *ChordChord* platform<sup>20</sup> (Ill. 1), which offers music production with a chord track and a drum track that can be regenerated, changed, and designed as often as desired, students almost exclusively focussed on creative change and self-creation. During reflection rounds, they explained how much fun it was to compose or produce something themselves. While AI-generated suggestions were used in some cases and described as being of high quality, the students found that relying solely on AI's output was not sufficient as a complete product.

### *Loss of creativity and artistic uniqueness*

The core of creative design processes – inventing and designing music using one's own expertise – is only marginally presented in the examples described. The fact that AI only plays a minor role in artistic creative practice – and will likely continue to do so – is supported by numerous testimonials from creative professionals. The Berlin based songwriter Charlotte Borlinghaus, for example, reports: “I only sometimes use *ChatGPT* in sessions to gather words and inspiration on a particular



Ill. 1: In the browser-based application *ChordChord*, drum beats and a chord track can be generated with AI or designed yourself



Ill. 2: Songwriting session: typical look of an image generated with Bing Co-Pilot<sup>22</sup> on the topic “songwriting session”<sup>23</sup>

topic, especially when I’m writing for other artists. I find it very helpful for rhymes, imagery and thought-provoking impulses. Overall, it also has a bit to do with my pride that I would no longer feel like a ‘real’ musician if I used AI regularly, and I would also be afraid of losing my creativity and naturalness when making music. I use AI so little in my writing because I’m afraid of losing my uniqueness as an artist.”

Singer Alexa Feser states in *Virtuos Magazine*: “I believe there is an energy that cannot be represented haptically or virtually but is transmitted solely through feelings and thoughts. (...) I think that’s what sets us apart from AI: the human, the imperfect and the unplannable. That is the energy that connects people. It is important that we, as humans, do not relativise ourselves through AI. We should rather see it as a tool.” (Winkler & von Sicherer, 2024)

### “Art and creativity are deeply personal translations of the world”

Film composer and Emmy winner Lars Deutsch from Los Angeles reports on the use of AI in the professional creative environment in Hollywood: “Here in LA, everything new is tried out quickly, often with a kind of frenzy for the latest social and technical topics. It’s often overdone at the beginning, and it takes a while for a better understanding to emerge. This is also the case with AI, although many now say ‘machine learning’, which is a step forward. Most creatives have realised that art and creativity are deeply personal translations of the world – the exact opposite of an automatically generated collage or big data. Writers have moved away from using *ChatGPT* for outlines, advertising agencies are disqualifying

itches that look automated, and in music, people have realised that you might automate stems<sup>20</sup> spontaneously, but you can’t create high-quality music at the touch of a button. If it sounds solid, it’s because of the stolen data, which is no longer socially acceptable. There are machine-learning audio post tools that are very useful, but they are moving more toward voice isolation. The gold rush is over for anything creative.”

### AI functions as a tool in creative design processes

AI can therefore function as a tool in creative design processes – a source of inspiration for original ideas, a machine for generating alternatives and a source of suggestions. It can provide musical patterns and melodies, synonyms and formulations, structures and questions on related topics or perspectives from existing research and sources that people can then use to become creative.

## THE GREAT OPPORTUNITY

Discussions about the risks and benefits of AI offer a valuable opportunity to reflect on the values, experiences, and human qualities we want to preserve. Alongside a reflective and emotionally nuanced sense of time and the life stories we experience, people will retain their creativity, character, feelings, and individuality – with or without AI. Music embodies all of this. Music has soul. And that is why it will remain human – in live performances, in communal experiences (Ill. 2), and as something that people do. A new consciousness may emerge with this era.

If AI-generated creations remain static and formulaic, “perhaps people will then tire of anonymous mass-produced pieces and will once again start to think, write, paint, film, play, and sing for themselves and others” (Nonnenmann, 2024) – then perhaps



## RESEARCH

in a post-AI age with all the technological developments and changes with and without AI (or somewhere in between) that have shaped creative fields by then.

### Preventing autoparalysis and countering fears

I would like to raise awareness of these issues and encourage active participation in discussions on social phenomena. This is essential not only to prevent autoparalysis in the face of technological progress but also to confront our “deeply rooted fears” (Bonini & Magaudda, 2024). It is especially important to support our adolescents, who can only learn to engage with developments reflectively and question their actions through thematization, experimentation and discussion. Talking with students about what AI creates and how it works can lead to particularly valuable questions and insights – especially regarding music: Do I want to listen to a song or see a performance by artists who express feelings rooted in their own lives? How can and do I express myself musically? What role and function should AI have in this? What do students think about the danger of AI replacing human musicians? What other challenges does the use of AI entail (bias, injustice due to the adoption of images of groups of people from (internet) sources, transparency, rights violations; see also Coutant & Cortina in this issue)?

This is an invitation to celebrate the great human capacity for creating art. Music, film, photography, visual design, and all performing and visual arts and media can benefit from discussing how they are being shaped and transformed in the AI age.<sup>24</sup>

## NOTES

<sup>1</sup> udio.com

<sup>2</sup> suno.com

<sup>3</sup> <https://hailuoai.com/video>

<sup>4</sup> All quotes from interviews and sources have been translated into English by the editorial team.

<sup>5</sup> The quoted statements (Joy, Charlotte Borlinghaus, Lars Deutsch) that are not provided with source references originate from interviews conducted by the author with the persons listed, who were interviewed on the occasion of this article.

<sup>6</sup> <https://chat.openai.com/>

<sup>7</sup> LANDR.com

<sup>8</sup> [izotope.com/en/products/ozone.html](https://izotope.com/en/products/ozone.html)

<sup>9</sup> The pitch envelope can be used to modulate the pitch over the course of playback.

<sup>10</sup> Dubstep originated mainly in South London under the influence of reggae, dub, garage, 2-step and other genres with a strong electronic or digital focus.

<sup>11</sup> Aiva.ai

<sup>12</sup> [audimee.com](https://audimee.com)

<sup>13</sup> [controlla.xyz](https://controlla.xyz)

<sup>14</sup> [melodystudio.net](https://melodystudio.net)

<sup>15</sup> [moises.ai](https://moises.ai)

<sup>16</sup> [lala.ai](https://lala.ai)

<sup>17</sup> [wavtool.com](https://wavtool.com)

<sup>18</sup> [coproducer.output.com](https://coproducer.output.com)

<sup>19</sup> YouTube playlist by the author with some examples of AI and music: [https://www.youtube.com/playlist?list=PLFjIgsdC2-qma3bklgYW4aEA-j4B40at\[24.9.24\]](https://www.youtube.com/playlist?list=PLFjIgsdC2-qma3bklgYW4aEA-j4B40at[24.9.24])

<sup>20</sup> [chorchord.com](https://chorchord.com)

<sup>21</sup> Stems are individual tracks of an audio or music production.

<sup>22</sup> [bing.com](https://bing.com)

<sup>23</sup> Prompt: A mixed group of creative songwriters (about 3-4 people aged 25-35) writing a song together in a tidy organic music environment without extra people in the background

<sup>24</sup> Regardless of the music topic, other perspectives can also be used as a good introduction or basis for discussion. In her essay “Unsound dispatch: 13 ways of looking at AI, art & music” (Walshe, 2023), the artist describes a multidimensional approach to taking a differentiated look at artificial intelligence and its use.

## REFERENCES

Alexander, David (2009). Propellerhead ReCycle. Total Training. (Electronic Video)

Arnal, Maria (2023). Maria Choir is a human-AI inter active musical artwork, created to be experimented in person through the act of singing. Available at: <https://mariaarnalmusic.com/Maria-CHOIR> [21.1.25]

Bade, Fabian (2023). Rollen und Potenziale von Chat GPT in musikpädagogischen Kontexten. Diskussion Musikpädagogik, 100, 48-57.

Berkowitz, Adam (2024). Artificial Intelligence and musicking. Music Perception, 41(5), 393-412.

Bonini, Tiziano & Magaudda, Paolo (2024). Artificial Intelligence: where the music of the future is heading. In Tiziano Bonini & Paolo Magaudda (Eds.), Platformed! How streaming, algorithms and artificial intelligence are shaping music cultures (p. 121-148). Basingstoke: Palgrave Macmillan.

Dilmegani, Cem (2024). When will singularity happen? 1700 expert opinions of AGI. Available at: <https://research.aimultiple.com/artificial-general-intelligence-singularity-timing/> [21.1.25]

European Commission (2023). AI Act. Available at: <https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai> [21.1.25]

Freytag, Verena (2015). Zum Glück (im) Tanz. Kulturelle Bildung Online. Available at: <https://www.kubi-online.de/artikel/zum-glueck-tanz> [15.1.25]

Fulde, Verena (2021). Beethoven's 10th Symphony completed by AI. This is how it sounds. Available at: <https://www.telekom.com/en/media/media-information/archive/beethoven-s-10th-symphony-completed-by-ai-633060> [21.1.25]

Holster, Jacob (2024). Augmenting music education through AI: Practical applications of ChatGPT. Music Educators Journal, Juni, 1-7.

Kreye, Adrian (2024). Künstliche Intelligenz ist verantwortungslos, Menschen nicht. Available at: <https://www.republic.de/verantwortung/ki-ist-verantwortungslos-menschen-nicht> [21.1.25]

Kwiecien, Joanna, Skrzynski, Pawel, Chmiel, Wojciech et al. (2024). Technical, musical, and legal aspects of an AI-aided algorithmic music production system. Applied Sciences, 14(9), 3541.

Lindemann, Stefan (2024). Neuorientierung auf allen Ebenen. Zur Frage von Kreativität unter veränderten Bedingungen. Neue Musikzeitung, 9(24), 15-16.

Mahani, Ziad (2023). KI als Religion. Impulsvortrag 26.10.2023, Tagung Ökonomie und Ethik, HS Heilbronn. Available at: [https://cdn.hs-heilbronn.de/18c7e4e3f5e0faf5/5668e4bd3ee2/Pr-sentation\\_Ethiktagung\\_20231026.pdf](https://cdn.hs-heilbronn.de/18c7e4e3f5e0faf5/5668e4bd3ee2/Pr-sentation_Ethiktagung_20231026.pdf) [22.1.2025]

Nonnenmann, Rainer (2024). Musikleben und künstliche Intelligenz. Neue Musikzeitung, 9(24), 16.

Polomski, Jens (2024). Hailuo AI: Text-to-Video-Modell aus China im Test – Qualität, Geschwindigkeit & Nutzererfahrung. Available at: <https://jens.marketing/hailuo-ai-minimax/> [21.1.25]

Rotsch, Tobias (2023). Künstliche Intelligenz im Musikunterricht. MIP-Journal, 68, 6-10.

Rotsch, Tobias & Werner, Lisa (2025). Künstliche Intelligenz im Musikunterricht. Musikbezogene Gestaltungsprozesse in Zukunftstechnologien. In Georg Brunner, Daniel Fiedler & Silke Schmid (Eds.), „Welchen Musikunterricht braucht die Sekundarstufe!“ <https://doi.org/10.60530/opus-3398>.

Walshe, Jennifer (2023). Unsound dispatch: 13 ways of looking at AI, Art & Music. Available at: <https://unsoundfestival.substack.com/p/unsound-dispatch-13-ways-of-looking> [21.1.25]

Winkler, Manuela & von Sicherer, Pia (2024). Bei Musik geht es nicht um Perfektion oder Reproduktion. Virtuos, 2, 28-29. Available at: <https://www.gema.de/documents/d/guest/virtuos-2-2024-pdf> [21.1.25]

## THE AUTHOR

Tobias Rotsch, graduate music educator, is an academic assistant at the University of Music Trossingen.

