

AI in Music Creation

This project explores how AI is reshaping music creation, driven by my curiosity about the intersection of technology, creativity, and the future of music.

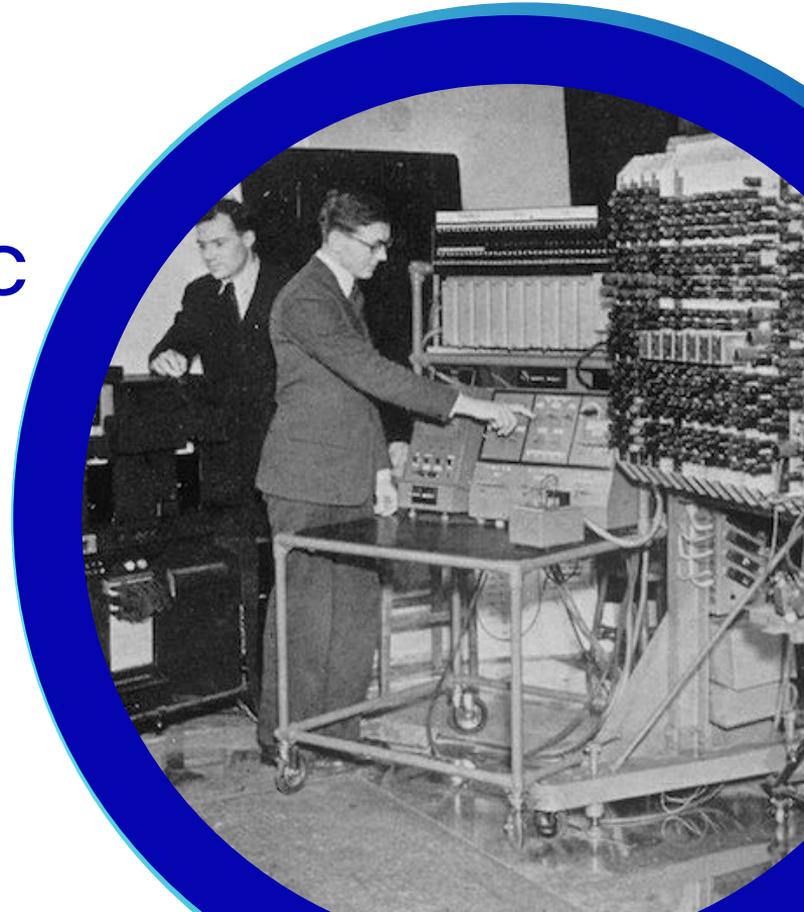
By Juliette Mangon



The History

computer use in Music

Music has been part of human culture for thousands of years, dating back to early civilizations. The leading attempts at computer generated music began back in the 1950s by pioneers like Alan Turing. The focus was on algorithmic compositions rather than replicating human styles or vocal patterns.



First Inventions



MEMORY DRUM OF ILLIAC I

ILLIAC SUITE BY LEHAREN HILLER & LENARD ISAACSON

1957

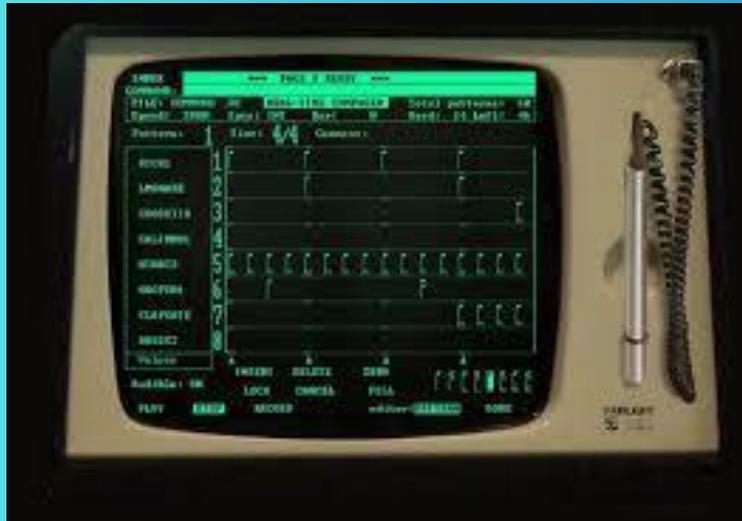


THE RISE OF MUSIC SYNTHESIZERS

- MINIMOOG (1970) MADE SYNTHS EASIER AND MORE ACCESSIBLE
- ENABLED ELECTRONIC SOUND EXPERIMENTATION WITHOUT COMPLEX SETUPS
- HELPED SHAPE FUNK, ROCK, AND ELECTRONIC MUSIC
- MARKED SHIFT TOWARD TECHNOLOGY IN MUSIC CREATION



INVENTION OF THE DIGITAL AUDIO WORKSTATION IN 1978

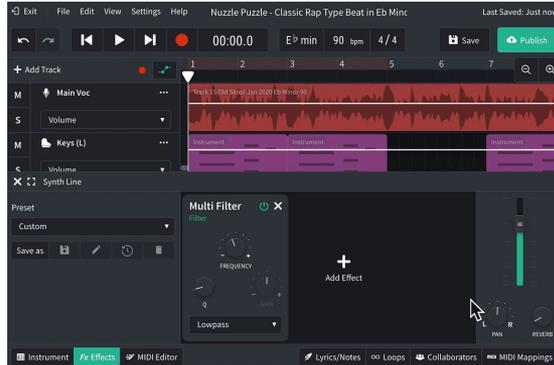


- ADVANCES IN COMPUTERS AND MIDI MADE DAWS POSSIBLE
- TOOLS LIKE PRO TOOLS AND CUBASE ENABLED FULL DIGITAL PRODUCTION
- ARTISTS COULD NOW RECORD AND MIX AT HOME
- STARTED THE ERA OF HOME STUDIOS AND DIY MUSIC CREATION

HOW IS AI BEING USED IN TODAY'S MUSIC CREATION SCENE?

2. REVOLUTIONIZING THE STUDIO...

LABELS AND PRODUCERS NOW USE AI TO ISOLATE VOCALS, MASTER TRACKS INSTANTLY, AND PREDICT HITS USING VAST LISTENER DATA, MAKING AI BOTH A STUDIO ASSISTANT AND A POWERFUL COLLABORATOR.



1. AI AS A CREATIVE PARTNER...

EMOTIONALLY ENGINEERED, FROM TOOLS LIKE BANDLAB AND BOOMY GENERATING FULL TRACKS, TO ENDEL CREATING ADAPTIVE SOUNDSCAPES BASED ON BIOMETRIC DATA.

3. BLURRING THE LINES OF EMOTION AND LEGACY...

AI is reviving iconic voices, like John Lennon's, AND CRAFTING MUSIC THAT RESPONDS TO HUMAN EMOTION, RAISING DEEP QUESTIONS ABOUT CREATIVITY, AUTHENTICITY, AND THE SOUL OF MUSIC ITSELF.

While many fans admire AI's creative possibilities, musicians are raising urgent concerns about consent, exploitation, and authenticity. Drake's use of AI-generated voices of Tupac and Snoop Dogg in his 2024 diss track sparked legal backlash and cultural discomfort, highlighting the ethical gray area of deepfake artistry.

Last April, over 200 artists (including Billie Eilish and Stevie Wonder) have signed an open letter condemning the "predatory" use of AI in music. Yet, fans often embrace AI-generated songs that evoke emotional truth

Is AI MUSIC Any Good?

We have to judge it on its own scale...

AI's INTEGRATION IN THE ARTS: It's pretty **turbulent** conversation!

CREATION IS A CATHARTIC JOURNEY: Do we lose that when we resort to formulas?

AI vs. HUMAN WORK: Does "good" equate to innate **quality**, or **how human-like it sounds**?

THE PRETENSE OF ARTIFICIALITY: Does it affect your perception, therefore the reality??

MIMICKING CULTURE vs. AFFECTING/EXPANDING IT: What can/does the music try to do or say?

MUSIC TIME!

#1: [Link](#)

#2: [Link](#)

What you just heard...

and no, it's not a Beatles song. Well, sorta..



DADDY'S CAR

Sony Computer Science Labs [Flowmachines]

What Makes It So Different?

The simple answer ... feel. But there's more...

PATTERN RECOGNITION: The model calculates different types of melodies, sonic templates, etc.

INSTRUMENT RECOGNITION: It knows what a guitar sounds like, or a drum, or a bass, or so on...

IT'S AN AVERAGE THAT'S NOT SO VARIABLE: Doesn't account for experimentation or deviation well.

AI MODELS MAKE "HALF-DECISIONS": For true random, which is where the distortion comes from.

IT HAS UNREALIZED POTENTIAL: It does not have the ability to replicate the human brain...

The Elements of Music

Music is built on core elements like rhythm, which gives structure; melody, the tune we follow; and harmony, the combination of sounds. These elements come together to create the songs and compositions we enjoy across genres.

The Future of AI in Music Creation

AI is reshaping how music is made, offering new tools for creation and production. While it expands possibilities, it also raises questions about emotion, authenticity, and the balance between human and machine in the creative process.

How AI can enhance Music Creation

- Generate melodies, harmonies, and full tracks
- Streamline mixing and mastering
- Inspire artists and overcome creative blocks
- Enable hybrid collaborations between humans and AI

Limitations and Concerns in AI Music Creation

- Cannot replicate real human emotion or lived experience
- Often produces music that is repetitive or lacks authenticity
- Raises serious ethical issues: originality, bias, copyright ownership
- Could undermine human creativity and threaten artists' livelihoods

The Nitty Gritty: AI and Copyright

The recent verdict from the United States Copyright Office

regarding generative AI:

- Work created fully through AI cannot be copyrighted
- A work that combines human work with AI can be copyrighted as long as there's "sufficient" amount of human creativity within the work

What does this mean for music and musicians?

- You can't copyright a work created by entering a prompt
- You can input your own copyrightable work into AI - this would be considered a "derivative work" - the new, human aspects can be copyrighted by the creator

Basically, only the human elements are copyrightable.

Where are we going with AI?

The United States Copyright Office is releasing one more report on copyright and AI:

- The third report is being watched closely by the music industry as it will issue a verdict on using copyrighted material to train AI
 - Ex. <https://youtu.be/sbaOMVDAiw4?si=XMIEQoYaY3jxSSTB&t=85>
- Sony Music, Universal Music, and Warner Music say Sonu and Udio trained their AI on copyrighted music
 - Sonu and Udio say they should be granted “fair use” privileges

If we allow AI companies to continue using released music to train models to create things like this Ariana Grande example, the history of music and creativity is in jeopardy.

Therefore....

A song or any work created by a machine, which uses previously protected work to create the AI work SHOULD NOT have the same "rights" as something created by a human. This only encourages it further.

AI companies should NOT be allowed to train AI models with work created by musicians. We need to protect our art in order to protect the future of creativity as we see it.

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