

MUSIC AND ARTIFICIAL INTELLIGENCE

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Abstract- Music has always been our essential part of human culture and it is a method of creation and analysis has grown around the advanced computation capabilities. AI is using variety of ways for creating and production of music composition. AI helps to analyze & synthesize music content or sound signals which are vast multidisciplinary topic. Auto signals are very helpful in extracting musical information. AI is very helpful in development of musical sound contents. AI has brought significant change to our traditional music.

Keywords: Music, Artificial Intelligence, Auto signals

Introduction

Music and artificial intelligence is the development of music software programs that use AI to generate music. AI listens to human performer and performs accordingly. AI also helps in interactive composition technology whereas computer composes music in response to a live performance. AI not covers only music but music composition production and performance but also how music is marketed & consumed. Many music systems have also been developed to use voice recognition for music voice control.

Artificial intelligence has dramatically transformed music composition over the years. The way of its evolution has been intricate yet enthralling, illustrating how technology can be blended seamlessly with art and creativity.

The journey of AI music

The journey of AI music began in mid of 20th century when different kind of activities were conducted with computer generated music. First time it was used by lilac suite for string quartet in 1957 by Lejaren Hiller & Leonard Isaacson to compose music. It improved the quality of music but also lead to a path of creating original piece by AI which is to be used in Music Industry.

Present –Status of AI

AI is very deeply involved in music industry as comparison to old time. There are many tools which replicate the different styles of existing artists but now a day's incorporate very novel touches offering innovation in the field of music composition. AI has revolutionized the field of music. The use of AI has made music composition more amazing & exciting.

AI as a collaborator

AI can replace human musician. AI Collaborate rather than competitor. AI do not replace human but enhance human creativity. AI cannot connect emotionally to music like humans do. It just helps the musicians for giving new adventures that was not available earlier. AI can combine with humans to redefine the Music.

Music Performance by AI

Music production involves different kind of activities such as mixing, mastering and editing of Sound which consist of auto tune, enhancement of Vocal, Vocal Synthesis of Vocal, remixing and sampling also. These days music composers very less compose music but edits more and direct music. Workstations are very old in this area but nowadays its portability has increased a lot & cost has become less. AI tool has focuses on responsiveness & real time interaction.

It is very difficult to combine different sounds in seamless manner. It needs creativity for high subjectivity. AI system supports to provide insight to the producer about audio characteristics & to identify areas which is very beneficial for human tinkering. AI system with special different task improves the process of mixing of music tracks into final Musical pieces.

AI can improve the creativity of musical outcomes. It can helps to create opportunities for creative outcomes. It helps to find different tools & platforms also which provide different various kind of Music. AI helps to write & arrange the lyrics of music. Coin has two sides. As AI has benefits but on the other side it can be with little bit emotionless also because it does not understand the emotions of human being. May be this can be sorted out in failure. Musicians have the concern of legal issues of AI in composing music. Copyright issues can be there. Musicians can face loss of fame also. It does not have cultural context that can be brought by human being.

The Music industry is undergoing a shift because of AI. The tools of AI democratize music production which helps those who may not have format training or access of expensive equipment. It can provide diversify action of voices, styles, new perspective, Stories and background music scene.

New Opportunities

AI tools opens new horizon in music composition offering new ways to compose music. AI meets musical creating to open new possibilities. AI is bringing a change in Music Industry. AI helps everyone like content creator, artist, musician to understand & use for everyone.

AI music composition uses advance technology like machine learning & Neural network. By using this AI can create music easily & in a fun mode. AI can be more than a tool. It can take music to a great height. It will be too hard by hand to try new sounds. AI generates the data to identify patterns & relationships between different musical elements.

Steps to identify pattern:-

- 1) Data Input
- 2) Pattern Recognition
- 3) Output generation

Data Input :- AI system receives a vast array of musical examples.

Pattern recognition :- AI identifies recovering chord progressions & rhythmic structures.

Output generation :- AI uses what it learned to create new music that mixes familiar elements in creative ways.

With AI it is possible to create music with format training. AI composes music which includes melodies, harmonies, rythms, and structures from numerous musical compositions.

Conclusion

Artificial Intelligence has very remarkable impact on Music. AI is rapidly expanding into the field of music & introducing new approach to music composition, music education and music performance. AI has a potential in reshaping the failure of music. AI helps everyone like content creator, artist, musician to understand & use for everyone. AI music composition uses advance technology like machine learning & Neural network. By using this AI can create music easily & in a fun mode. AI can be more than a tool. It can take music to a great height. It will be too hard by hand to try new sounds.

References

- Alberto Martinez Jr (2024) How Artificial Intelligence is Revolutionizing Music Composition).
- Born (2021) Artificial intelligence ,music recommendation,and the curation of culture.
- Deruty et al.(2022)On the Developmentand Practical of AI Technology for Contemporary Popular Music Production.International Society for Music Information Retrieval, 5(1),35)-50.
- Fox, Vaidyanathard and Breese (2014). The impact of artificial intelligence on musicians, Vol 25, issue 3pp. 267-276.
- Sylvain Marchand (2023), Artificial Intelligence in Audio and Music, Academic open Access Publishing), ISSN 2076-3417.
- Zhang (2024) Transforming Music Education through Artificial Intelligence. Vol.18 No. 18. [https:// doi.org/ 10.399/ijin.V18i18 . 50545](https://doi.org/10.399/ijin.V18i18.50545).