Inspiring Excellence

Paper Review

"On the Development and Practice of AI Technology for Contemporary Popular Music Production"

Course Title: Distributed Computer Systems and High Performance Computing

Course Code: CSE449

Name: Md. Sifat Mahmud

ID: 20101477

Section: 01

Submitted To

Annajiat Alim Rasel

Senior Lecturer

Department of Computer Science and Engineering, BRAC University

1 Summary

1.1 Motivation/purpose/aims/hypothesis

This research looks into the advancement of AI tools towards the creation of contemporary popular music (CPM), taking into account scientific concerns and artist feedback. The authors examine the gaps between previous research and the in-studio composition process, arguing whether audio-based AI solutions are particularly appropriate for aiding artists' innovative processes.

1.2 Contribution

This research provides useful insights into the practical application of AI music technologies in CPM production. Thematic analysis of artist input indicates crucial characteristics to consider while developing AI tools, such as:

- Workflow integration: Tools should work in tandem with current workflows. Tools should simplify tasks and save time in the production process.
- Enhancement of creativity: Tools should inspire creativity and provide innovative possibilities.
- Identifiable outcomes: Tools should add recognisable aspects to the song. Integration of AI outputs in commercially released music represents validation.
- Published content: Integration of AI outputs in commercially released music represents validation.

1.3 Methodology

The paper employs two approaches:

- Theoretical analysis: The authors conduct a theoretical examination regarding the in-studio composition process in CPM.
- Artist collaboration: The writers examine reports on professional musicians' use of AI music tools in the actual world.

1.4 Conclusion

The study concludes by:

- Making suggestions on the development of AI technologies for CPM.
- Developing parameters in order to assess the usability and value of AI music technologies.
- Emphasizing the importance of future study and comprehensive evaluation.

2 Limitations

2.1 First Limitation/Critique

The study focuses exclusively on professional artists' opinions, potentially ignoring the demands and experiences of amateur musicians or other stakeholders.

2.2 Second Limitation/Critique

The study does not dig thoroughly into the technical aspects of AI tool creation, offering only a brief overview of the unique issues and solutions involved.

3 Synthesis

This paper lays the framework for future research on CPM AI music technologies. The findings and recommendations can be used to guide the development of tools that are more relevant, useful, and engaging for all levels of music creators. Furthermore, the proposed validation criteria give a framework for evaluating AI's impact on the music production ecosystem.

Potential applications and potential applications:

- Create a broader spectrum of AI tools for many elements of the music creation process.
- Create AI technologies that are more adaptable and customisable to match the needs and preferences of individuals.

- Investigate AI's potential for collaboration and improvisation.
- Investigate the ethical implications of artificial intelligence in music creation, such as ownership and copyright.

Future research can help to develop AI music tools that empower and inspire artists of all backgrounds by resolving restrictions and investigating potential applications.