



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**

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# **1 Summary**

## **1.1 Motivation/purpose/aims/hypothesis**

This study investigates the development of AI tools for the production of contemporary popular music (CPM), informed by both theoretical considerations and artist input. The authors look at the gaps between existing research and the in-studio composition process, proposing that audio-based AI solutions are more suited to supporting artists' creative workflow.

## **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 of 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 proposals for the development of AI technologies for CPM.
- Proposing criteria for determining the utility and worth 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.