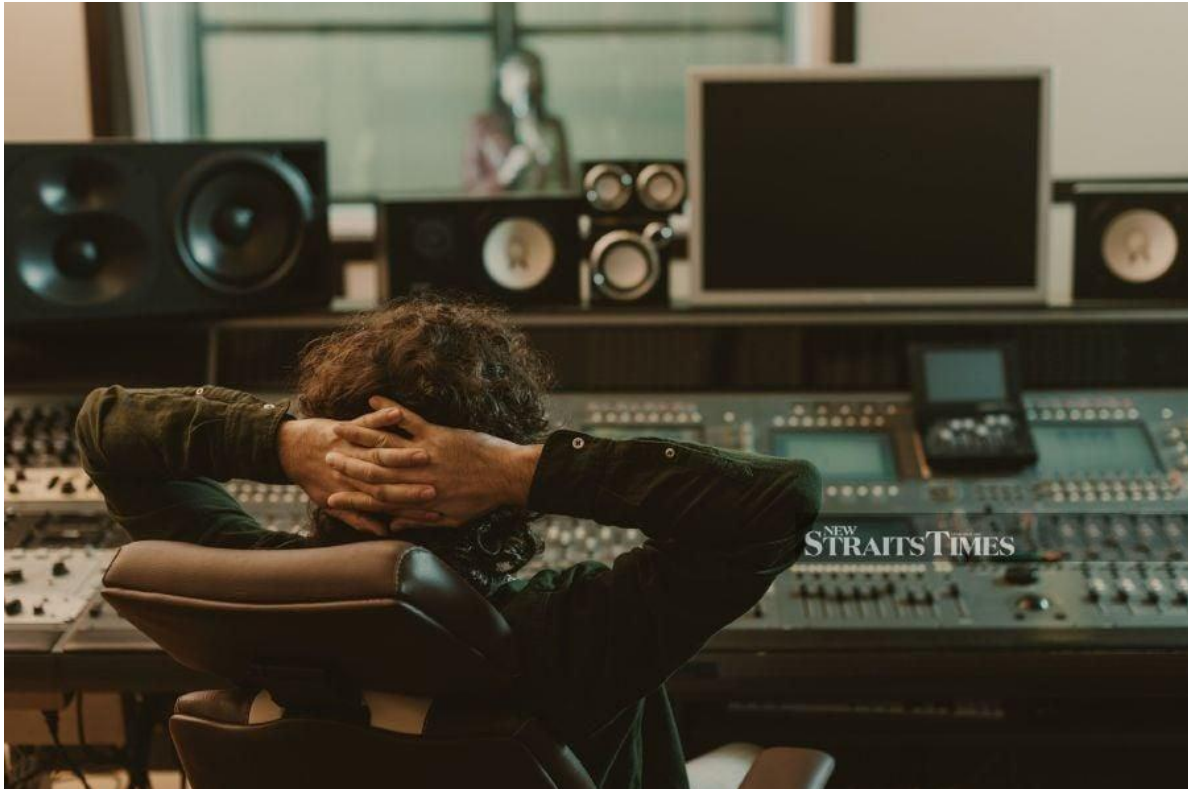


## #TECH: Could artificial intelligence shape the future of music-making?

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Some music industry professionals fear that AI will become a direct competitor to songwriters, producers and even singers.

SINGSONG was created by researchers at the Google Research centre. It is described as an intuitive new way to create music for singers of all skill levels.

Jesse Engel and colleagues used an algorithm to separate instrumental and vocal tracks from 46,000 hours of music. They trained an artificial intelligence model previously developed by Google Research using these different recordings.

This experimental phase allowed the artificial intelligence to learn to work with audio tracks that were not initially in its database and to create custom musical accompaniments, according to New Scientist magazine.

But how do they compare to those created by humans? To answer this question, the scientists played 800 pairs of short recordings to music lovers. They wanted to find out if they were able to differentiate between songs with backing tracks that were AI-generated and those composed by a human musician or added randomly.

Participants in the study, the findings of which are published online, said they preferred the contribution of artificial intelligence in 66% of the cases. They found that the musical accompaniments it generated were more compatible with the lead singer's voice. "Subjectively speaking, SingSong outputs instrumentals that often have clear harmonic and temporal correspondence to the input vocals," write the researchers.

## **A DIRECT COMPETITOR FOR MUSICIANS?**

However, they noticed that SingSong had a harder time creating convincing backing tracks when the voices were recorded by amateur singers. This appears to be because amateur singers often struggle to stay in the right tempo and maintain the same pitch. But Jess Aslan, a lecturer in music at Goldsmiths, University of London, finds these first results highly convincing. "I wouldn't say you'd release it as a finished track. It would need development, but it seems to be working in terms of coherence, for sure," she told *New Scientist*.

The creation of SingSong raises many questions about the future role of artificial intelligence in the music industry. Some fear that it will become a direct competitor to songwriters, producers and even singers. Indeed, Microsoft has recently developed a tool called Vall-E that can reproduce any voice from a simple three-second sample. This innovation could potentially be used in the creation of new songs, even if it was not created for that exact purpose.

Nevertheless, many are now calling for the implementation of strict regulations faced with the success of so-called generative artificial intelligence. China has taken the lead on this issue with legislation entering into force on January 10, requiring that all content generated by AI be clearly identified as such, reports *Techcrunch*. It is likely that other governments will follow suit in the coming months.