

OFFICIAL ABSTRACT and CERTIFICATION

Determining the Ability of an Algorithm to Imitate Human Musical Composition

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Within this experiment, the ability of a computer algorithm to imitate human musical composition was tested. Such an algorithm was designed with fundamental aspects of music in mind, including melody, harmony, rhythm, and form. Machine learning was not used, as the goal was to create an algorithm that had the ability to make music that was not derivative of a specific composer, style, or even of human music in general. It was hypothesised that while such an algorithm could be created, that human participants could easily differentiate between this, and music from a human composer. Three excerpts were generated by the computer, and three excerpts written by a human were found to make a representative sample of each type of music. Fifty human participants were all shown two excerpts, and asked what they believed the origin of the music was. Slightly more than half of the questions were answered correctly, but statistical analysis showed that said difference was not significant, therefore not supporting the hypothesis.

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