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Computer-Assisted Algorithmic Compositional Approaches: The Role
of AI in Music Creative Practices

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Abstract

Algorithm had rich precedents in music, and composers' relationships with algorithms have been witnessed since ancient times. With the advent of computers, music was forced to go beyond the boundaries of the traditional musical languages. The mid-1950s was a transitional period between traditional and innovative modes of thoughts in compositional practices. Music technology stimulated the growth of music while altering musical forms. During the second half of the 20th century, the positive results from the musical experiments have demonstrated the flexibility and generality of computer-assisted compositional methods. This study offers a deep view of a wide range of approaches for algorithmic compositions. In the modern landscape of algorithmic music, the various approaches of algorithmic composition have opened new directions in music, including the stochastic method, rule-structured technique and Artificial Intelligence (AI) -based systems. The computer, as an assistant of the human composer, was designed to execute rules, learn rules and create rules.

This study focuses on the musical evolution from the topics of musical patterns, algorithms, AI, computational creativity to collaborative intelligence, by examining composer's perspectives on what compositional technique they approach, and how they approach it. A number of musical works have demonstrated the power of human-AI interaction. Composers are seeking sophisticated, advanced and intelligent approaches to extend the potential of computer-assisted music. The implemented algorithm can represent composers' creative processes, and algorithmic composition is considered as a mode of creativity. From the current millennium, there is a growing trend for composers to embrace state-of-art technologies and to infuse AI languages into music creative practices to complement their musical minds.