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Creative Coding: A Unique Pedagogical Model for Teaching Computer Science to Artists

Ajay Kapur, Perry Cook, Michael Bryant, Jennifer Hutton
California Institute of the Arts (USA)
akapur@calarts.edu, prc@cs.princeton.edu, mbryant@calarts.edu, jhutton@calarts.edu

Abstract
This paper describes the implementation of a unique pedagogy for teaching computer science skills to artists, musicians, and creative practitioners. In it, the principles of computer science are taught through engaging and meaningful projects complementary to the artists' individual output using two key tools: ChucK, an open source programming language used for composing music in real time, and Processing, a novice-friendly, Java-based programming environment. By placing STEM-based curricula as a foundation for creative work, this method augments a student's primarily creative learning goals with more practiced problem solving skills. Furthermore, the scope of each project necessitates a deeper understanding of more complex skills such as algorithmic techniques and programming. Over time, it is anticipated that such sonic and visual experiments will encourage the development of more technology-driven art. This paper concludes that such a curriculum is a necessity for artists in light of their increasing need for computer literacy and technological self-sufficiency.