BachProp: A Trainable Generative Model of Music Scores

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Presentation Abstract Summary Humans have been generating new pieces of music since the beginning of history. Starting from oral transmission to modern digitized representation, there is always been an interest in formalizing the structure of music. In this paper, we present an entirely data-driven probabilistic model of how human composers choose to combine particular notes or rhythms. BachProp is a conditional recur- rent neural network especially suited to extract relations between notes from examples. Its architecture is inspired by the structure of the MIDI format, where each note in a music score is represented by its relative timing and pitch value. BachProp is able to capture enough of the relation between notes present in datasets of polyphonic music in order to generate new and coherent pieces of music that exhibit a structure close to real polyphonic music scores.

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