

# WhoComposedIt?

## Deep learning solutions to the composer classification problem

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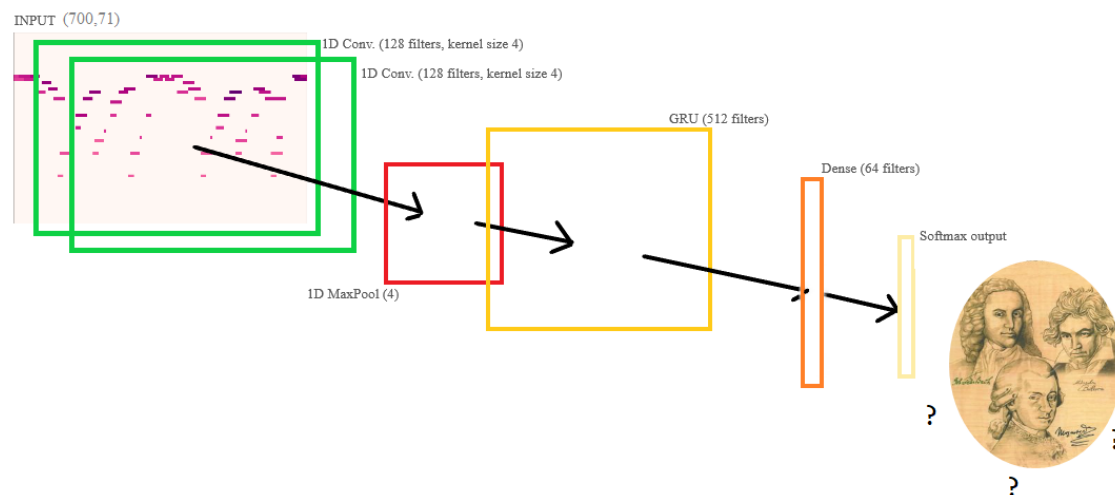
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Have you ever heard a piece of music for the first time, but don't know who the composer of the song is? Have you been in such a position where you are almost sure you have heard of similar music before and are trying hard to guess where you heard it before? Musicians all around the world have their own distinctive features of composition, singing style, instrumentation, etc. which set them apart from the rest of the crowd. There are often disputes among music experts about who the true composers of some classical pieces actually are.

In this study, we try to address the "Composer Classification Problem". The aim is to learn a model that can identify the composer of a given input song that it hasn't encountered in the past. We try to classify arguably three of the most successful western classical composers – Wolfgang Amadeus Mozart, Johann Sebastian Bach and Ludwig Van Beethoven.

In the past, many scientists have used machine learning techniques like logistic regression and some convolutional models. Deep learning models were relatively unexplored due to lack of enough data sets. This makes the problem challenging. The existing deep learning studies have mostly relied on feedforward neural networks to perform their studies. In our study, we try to perform the classification using Convolutional units and a Gated Recurrent Unit (GRU).



Highest accuracy: 72.1%

Data sets: <https://www.classicalarchives.com/>

Report: <https://drive.google.com/file/d/1vGRWXFZFMfM-8BKV8VaebykyG4oukSI0/view?usp=sharing>

Code available on GitHub: <https://github.com/siddharthbachoti/WhoComposedIt>