Post-Study Debrief
The Algorithmic Composition of Classical Music through Data Mining
By Tom Donald Richmond and Dr. Imad Rahal

Thank you for taking the time to participate in this study. Your feedback will be used to determine the success and potential of our experiment.

The study you just participated in is part of an All-College Thesis project titled *The Algorithmic Composition of Classical Music through Data Mining* by Tom Donald Richmond with Dr. Imad Rahal. The point of the study is to see how successfully the concepts of data-mining and classification can intersect with autonomous music composition.

In an attempt to achieve this task, we gathered a large number of musical scores from the six classical periods of music and extracted from them the frequency with which certain musical intervals (unison through octave) appeared in the piece. We then provided a machine learning algorithm called Naïve Bayes with these frequencies as input data, and instructed it to learn how to distinguish between the eras using only these attributes. Through a process called cross-training, the computer learned how to distinguish which era a piece was derived from with approximately 85-95% accuracy.

We used this specific machine learning algorithm because the output produces a statistical breakdown of what it expected to see within a piece to make its determinations. We used this output as the basis of our rules for algorithmic composition. Building upon a concept called Cellular Automata with binary sequencing, the computer produces a succession of notes using our newly derived rules. The results of that process were presented to you for the sake of the study.

If you have any more question, please feel free to email Tom Donald Richmond (tdrichmond@csbsju.edu). Additionally, if you would like to receive a copy of the thesis when it has been completed, do the same and one will be provided for you. Thank you for your help in making this experiment possible.