SUMMARY

This project successfully created a basis for building a bass guitar-playing mechatronic system based on a MIDI format. However, it has come short in some ways.

The software, which was the main contribution from this project to the world, worked quite well but lacks a few features, such as an interface for the selection of the music being played, and support for finding and playing different octaves or recognizing chords. Additionally, the accuracy of the function for fret selection remains untested and requires calibration.

The design of a physical body was mostly concerned with designing suitable linear actuators for the linearly moving parts. A design was created based on an existing attempt by Ali Aslam (*potentprintables*), which seemed to fit the project quite well. However, further strength testing is needed to confirm this.

Most notably, the research and testing done in the course of this project uncovered why using servos was not a great idea – on top of their inaccuracy which may be somewhat mitigated, they are quite slow. For a future project with similar goals, pneumatic actuators are the recommended course by the author. However, it may or may not be feasible to permanently attach an air compressor to the automaton, as it would severely limit mobility.