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Customer Background

The hurdy gurdy is a traditional instrument popularized during the Renaissance. Due to this, the instrument has little modern application and cannot keep up with current recording techniques

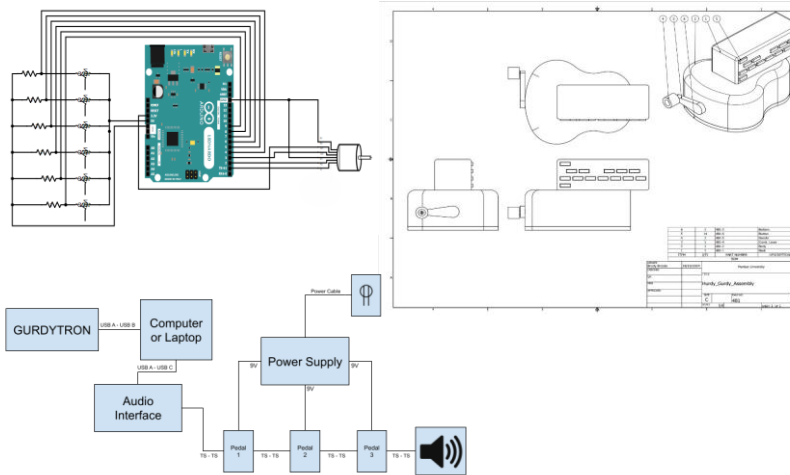
Problem Statement

The goal of this project is to create an augmented instrument that keeps the authenticity of the hurdy gurdy while meeting the needs of those seeking a digitized musical instrument. This will be achieved by digitizing a mechanical process and creating a new MIDI instrument that functions like the traditional hurdy gurdy but has DAW (Digital Audio Workstation) capabilities.

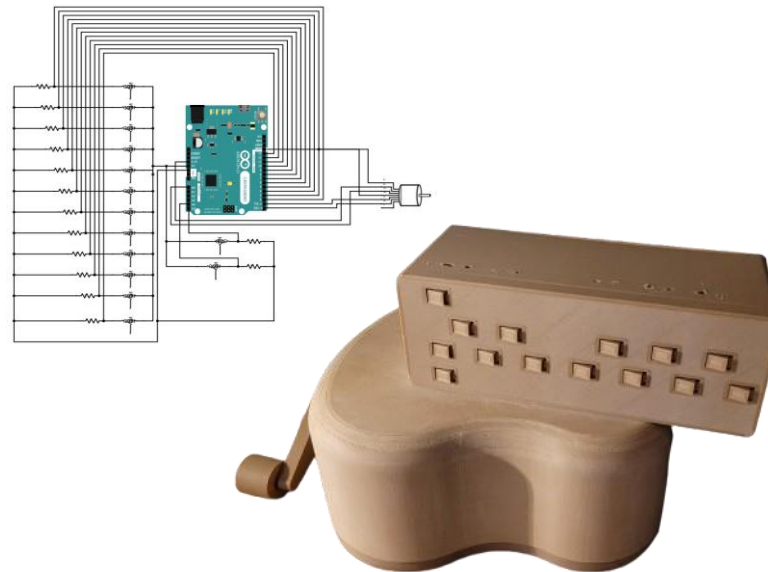
Requirements

Design Requirement	Verification
Crank affects how note is played	Drone strings activate, volume changes with speed
Note on/off	Note will only be played while crank is active
Octave up/down keys	Pressing corresponding button will shift pitch up/down one octave
Note order	While a note is being played, lower notes cannot be played

Experimentation and Concepts



Final Design



Testing

Testing of our instrument was mainly performed through FL Studio and various instrument functions can be seen below.

