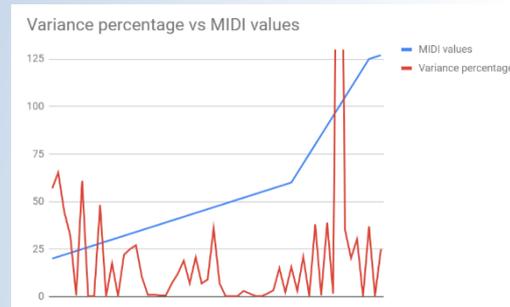
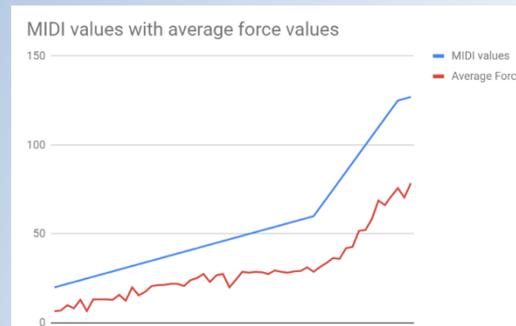


Imparting Expressivity and Dynamics to percussive musical robot Shimon

The Problem



The Reason



The Solution

Angle and Speed data

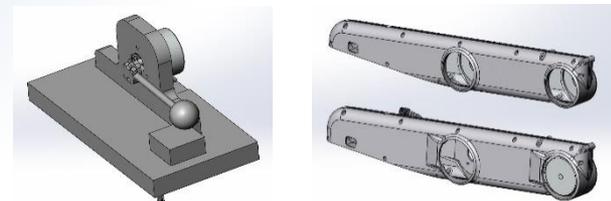
- Encoder and hall effect sensor

Impedance control equation

- Gives a measure of torque based on input

Changing input current

- This translates to the output force



Midi Input

- Note and Velocity values

Microcontroller

- Converts MIDI values to control signals

Motor controller

- Sends input values to the motor

Motor with Mallet

- Strikes the different notes