

Software		
	Component	Use
	MusicXML Files (or MIDI) (MuseScore)	Songs ranging from C2 – C6 for the 61 Keys
	Python 3 - Libraries Used: asyncio, mido, auto fingering, pandas, music21, bleak, numpy, serial	Used to coordinate async options, interface with MIDI input, generate fingerings, manipulate data, parse MusicXML/MIDI files, connect to bluetooth, process numbers, and connect to LED strip via serial
	Bluetooth (Python) Uses bleak dependency	Used to coordinate async options, interface with MIDI input, generate fingerings, manipulate data, parse MusicXML/MIDI files, connect to bluetooth, process numbers, and connect to LED strip via serial
	Microchip Studio (C++) (LED) -Libraries Used: Adafruit NeoPixel	Piano note data sent to the Arduino via pyserial from the python code. Python code sends bytes corresponding to the LED number ranging from 0-61 and the corresponding color (EX: 0b0100001)
	Microchip Studio (C++) (Haptic Motors)	Fingering data is sent to the bluetooth component that is then processed by the microcontroller to turn on the corresponding GPIO pins based off of the MIDI file