

Archetype Plini MIDI interfacing software

CSC Senior Project

- Purpose:

- Guitarists have both hands busy while playing and hence need pedal boards or floor based guitar effects units to process and allow transformation of sounds. While the technology for pedal boards is constantly improving and sounding more like the real analog gear (amps, stomp boxes etc) that is used to create these sounds, most affordable effects units really don't sound too great. However, in the audio engineering/studio world, software plugins have been and are being created to emulate very expensive analog gear and they come extremely close to the tone produced by those expensive amplifiers, stomp boxes etc. The only drawback they have is that they are designed for studio use and not as much for live performance as the effects units discussed earlier are. Hence, the purpose of the software I'm designing is to take these studio based plugins and make them versatile enough for live performance.

• Goals:

- This program will ideally interface with my MIDI foot controller and allow it to control the Archetype Plini Plugin/App to make tonal changes and cycle through existing preset libraries so that I can change sounds in real-time with the tap of my foot.

• Context:

- This software is useful because it will take a standalone version of a guitar tone plugin that is used in DAWs to achieve studio quality guitar tone and make it versatile for a live performance setting, thereby giving the performer the best possible tone for live performance accessible through a single tap of the foot.

• Audience:

- This program is intended for guitarists or performers who use effects units with their instrument.

• Functionality:

- This software will be able to receive and parse MIDI messages from my MIDI foot controller and use GUI automation libraries to interact very specifically with

the plugin software to make changes in the tone of the received guitar signal or cycle through existing/pre-saved tone prints for different parts of songs or any use in live performance.

- Milieu:
 - There are some general guitar effects software that support MIDI interfacing but just like pedal boards/effects units, they don't sound as good as studio-focused plugins/software.
- Novelty:
 - My plugin is different in that is taking a guitar tone emulation software that was used in a studio mix for a record and making those tones available for live performance.
- Resources:
 - Archetype Plini Software
 - Python
 - Xcode
 - Python GUI libraries
 - StackExchange
 - YouTube Tutorials
- Challenges:
 - Figuring out how to make the MIDI libraries communicate with the GUI libraries to appropriately control the software.
 - Creating the standalone app for Mac. I have never created an app before so this will be totally new.
- Inspiration:
 - I loved the sound of the Archetype Plini plugin and I really wished I could use it in a live setting because it would give me the best tone possible for that setting. Especially for playing in church, music ensembles and other projects, I had another standalone software (called BIAS FX) that sounded okay and had MIDI functionality to communicate with my MIDI foot controller. But I really wanted to somehow make the Archetype Plini plugin versatile for a live setting.

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- This software will take my live guitar tone to the next level if it is successful and works the way I want it to. I will be able to use it in church, school ensembles and any live performance I'm involved in that needs my guitar playing.
- Measures:
 - This software will be successful if it correctly interprets the midi messages received, performs the necessary interaction with the Archetype Plini software in an instant and does not cause any undesired latency or problems while working in conjunction with the Archetype Plini Software.