EE/CPRE/SE 491 BI-WEEKLY REPORT 2
January 30, 2020 - February 13, 2020
Group number: 56
Project title: Sound Effect Devices for Musicians
Client &/ Advisor: Dr. Randy Geiger
Team members/role:
　　　Dalton Sherratt: App programming
　　　Eric Stablein: Signal processing, meeting facilitator
　　　Zach Besta: Signal processing, meeting scribe

Period summary

During these two weeks, the group continued work on the various effect modules and the app UI. Dalton worked on unifying the UI design around a common theme. Eric finished work on the pitch shifting effect module. Zach worked on examining different methods of audio playback and envelope filtering.

Past period accomplishments

Name	Individual contributions	Hours these two weeks	Total hours this semester
Dalton Sherratt	● Began work on creating a UI theme for the app ● Implemented SoundPool-class-based sampler playback	12	24
Eric Stablein	● Finished Java class capable of pitch shifting and incoming .wav file that will later be merged into the app ● Began researching the implementation of equalizers	12	24
Zach Besta	● Finished implementation of sound-triggering pads with adjustable speed using Android Studio and MediaPlayer class ● Researched playing audio via SoundPool and AudioTrack classes due to latency concerns with MediaPlayer	12	25

Plans for the upcoming week
- Dalton
    - Finalize application user interface design
    - Begin integrating effect modules into main application

- Eric
  - Begin merging java classes that edit .wav files into app
  - Create java class that functions as an equalizer
- Zach
  - Test implementation of sample playback using SoundPool class and compare to MediaPlayer class
  - Compile advantages and disadvantages of switching API level to allow use of VolumeShaper for envelope functions
    - Create implementation of sample playback using AudioTrack if VolumeShaper is used and MediaPlayer is insufficient
  - Begin refining user stories for external use (presentations, etc.)

Summary of weekly advisor meetings
- The first advisor meeting this period (February 4th) was cancelled due to a scheduling error.
- The second advisor meeting (Feb. 11th) was shortened due to the Spring Engineering Career Fair.
  - Topics discussed were the current state of the project and future plans
    - Both Dr. Geiger and Dr. Chen wanted the group to make some refresher materials due to the long gap since the last meeting
    - Dr. Chen wanted to see a clearer picture of the group's progress and plans
      - The group will create a brief presentation to address this
    - Dr. Geiger wanted to see more of how the sampler app fits into the big picture of a musician's setup
      - The group plans to create new user stories and update old ones to clarify things