

EE / CPRE / SE 491

Sheet Vision

Iteration 12 Report

9/27/2019 - 10/11/2019

Student suggested Project

Faculty advisor: Alexander Stoytchev

Team Members:

Bryan Fung — Frontend, Software Engineering

Garrett Greenfield — Front end, Software Engineering

Ricardo Faure — Frontend/Backend, Software Engineering

Trevin Nance — Machine vision, Software Engineering

Walter Svenddal — Machine vision, Software Engineering

Past Week Accomplishments:

- Got images with hard coded lines to produce mostly accurate MIDI files.
- Obtained and analyzed fourier spectrograms of audio file to search for played notes.
- Separated our features into different modules for front end.

Pending issues:

- Camera on mobile isn't scaling with display.

Individual Contributions

<u>Team Member</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>Total Hours</u>
Bryan Fung	Implemented screens for each of our features and worked on trying to implement the piano into the new screen	7	55
Garrett Greenfield	Implementing the microphone accessibility on react native	4	48
Ricardo Faure	Research on Android Development Tools Testing new AWS Lambda Architecture	3	61
Trevin Nance	Created a python script to do all of the setup for an image as well as refactored to make accidentals and octaves easier	5	64
Walter Svenddal	Audio note detection research	10	60

Plans for Coming Week:

- Bryan Fung:
 - Get the piano implementations into the working app.
- Ricardo Faure:
 - Finish Setting up AWS Lambda and API Gateway with our openCV Scripts
 - Finalize AWS Lambda and React-Native communication for sending a receiving MIDI files.
- Garrett Greenfield:
 - Get the mic usable for the application for further implementation
- Trevin Nance:
 - Integrate all computer vision code, add dotted note support
- Walter Svenddal
 - Find strategies of consolidating nearby line segments to find measure lines
 - Create algorithm to identify note candidates and match them against MIDI files