EE / CPRE / SE 491
Sheet Vision
Iteration 4 Report

3/02/19 - 3/08/19
Student suggested
Faculty advisor: Alexander Stoytchev

Team Members:

Bryan Fung — Frontend/Backend, Meeting Facilitator
Garrett Greenfield — Front end, Team Scribe
Ricardo Faure — Frontend/Backend, Meeting Facilitator
Trevin Nance — Machine vision, Chief Engineer Power System
Walter Svenddal — Machine vision, Report Manager

Past Week Accomplishments:

- Set up react+electron environment (Ricky)
    - Created a mock application that uses React JS wrapped into an Electron JS window.
    - Verified that it is possible to communicate with an AWS machine to run python in the backend.
- Defined architecture (Everyone)
    - Defined a complete architecture for how our application is going to interact with its different components.
- Created a diagram for the architecture (Trevin)
    - Created a Diagram that explicitly shows all of the components of architecture and how they will communicate
- Updated the Trello (Everyone)
- Resource collection and Opencv (Walter)
    - Obtained sheet music to be used for the machine vision process
    - Learned how to do machine vision with discovering measure lines in sheet music
- Set up react+electron environment (Bryan, Garrett)
    - Created a dummy application that uses React JS wrapped into an Electron JS window.

Pending issues:

- Setting up AWS
- Sending images to AWS might be trivial

Individual Contributions

Team Member	Individual Contributions	Hours this week	Total Hours
Bryan Fung	Set up react+electron environment and made a basic application. Researched on how it works works.	3	19
Garrett Greenfield	Set up environment and went through a react tutorial for a basic application and researched all possible and useable frameworks that could work with our communications.	4	14
Ricardo Faure	Tried out different ways to implement desktop application aside from react-native-windows, extended research on web frameworks.	10	20
Trevin Nance	Helped to define the architecture and decide on 3rd party technologies to use, created a diagram for the architecture, helped to update the trello	3	18
Walter Svenddal	R&D of OpenCV on sheet music	4	12

Plans for Coming Week:

- Whole Team:
  - Create a Communications diagram for all of the frameworks
  - Research and confirm how the audio processing will work
  - Fully Define the Architecture of the project
  - Create a Dummy Application that has full communicative properties throughout the architecture
- Bryan Fung:
  - Create a small prototype application that can take a picture and store it.
- Ricardo Faure:
  - Set up an Amazon EC2 machine to run opencv and be accessible through REST API calls from the electron+reactJS frontend.

- Garrett Greenfield:
    - Create a form of communication and be able to send a saved picture to the aws for later processing.
- Trevin Nance:
    - Start creating the function for the backend which will find whole notes from the sheet music and the moment of each one.
- Walter Svenddal:
    - Furthered development and understanding of how OpenCv.Js will see and process the sheet work.
    - Make the Machine Vision see the lines and notes of the project.