

EE / CPRE / SE 491

Sheet Vision

Iteration 16 Report

11/22/2019 - 12/06/2019

Student suggested Project

Faculty advisor: Alexander Stoytchev

Team Members:

Bryan Fung — Frontend, Software Engineering

Garrett Greenfield — Front end, Software Engineering

Ricardo Faure — Frontend/Backend, Computer Engineering

Trevin Nance — Machine vision, Software Engineering

Walter Svenddal — Machine vision, Computer Engineering

Past Week Accomplishments:

- Designed poster.
- Improved UI.
- Implemented new algorithm for the new JSON format.
- Added color decay after piano key is played.
- Improved accuracy of white page cropping using OpenCV contours
- Improved accuracy of section cropping using OpenCV contours
- Improved runtime of MV algorithm by resizing images to spread up gaussian thresholding and contour finding

Pending issues:

- Tune up computer vision algorithms on the server.
- Fix bug in the algorithm to read from the JSON.

Individual Contributions

<u>Team Member</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>Total Hours</u>
Bryan Fung	Implemented new algorithm to read from new JSON format, added color decay when a piano key is played after 1 second, added option to choose which default song to play.	16	123
Garrett Greenfield	General updates and cleaning of the UI and the functionality around it.	5	91
Ricardo	Cleaned up server communications. Added more quality of life changes to client. Assisted in adding computer vision algorithms to AWS. Testing.	15	102
Trevin Nance	Updated computer vision algorithm on AWS, added dotted note support. Worked on general improvements to note detection accuracy and line placement.	8	97
Walter Svenddal	Code cleanup, improving page cleanup accuracy and runtimes	20	120

Plans for Coming Week:

- Bryan Fung:
 - Fix bug in the algorithm to read from the JSON.
- Ricardo Faure:
 - Assist with updating AWS algorithms in AWS.
- Garrett Greenfield:
 - Complete and finish the front ends functionality on the application.
- Trevin Nance:
 - Fine tune note detection for demo.
- Walter Svenddal:
 - Make sure sheet detection and clean up is reliable.
- All:
 - Update the design document.
 - Work on final report.
 - Prepare and work on final presentation.