

EE / Cpr E / SE 492 - SDMAY 21 - 48

Learning Holiday Light Display

Week 1 Report

Jan 25, 2021 - Feb 7, 2021

Client and Faculty Advisor: Dr. Daniels

Team Members:

Christopher Woods - Chief Software Engineer

Ty Gardner - Chief Engineer (Computer Vision)

Jacob Martin - Chief Computer Engineer

Ashkirat Singh - Meeting Facilitator

Mitchell Wadle - Meeting Scribe

Joyeux Noel - Report Manager

Past Week Accomplishments:

Mitchell:

Researched and designed the schematics for the motorization of the Lazy Susan

Jacob:

Designed the initial stage of calibration

Joyeux:

Revised the plan for interfacing with the Lazy Susan

Chris:

Designed the mathematical formulation for mapping the coordinates onto a cone, created example files, began code implementation

Ty:

Designed the script for converting the coordinates in cylindrical to cartesian plane

Ash:

Researched some Python libraries that would help take gradient of images and also utilized the script created by Ty to come up with basic animations for the LED display

Pending Issues:

- Need to test the scripts designed by Ty and Ash for animating the light display - Ty and Ash
- Test the design of motorizing the Lazy Susan - Mitchell and Joyeux

Individual Contributions:

Team Member	Contribution	Weekly Hours	Total Hours
Jacob Martin	Continued work on the calibration feature that will be used by Chris eventually	6	12
Chris Woods	Work regarding math formulation for optimization	7	14
Ty Gardner	Python scripts that convert cylinder to cartesian	6	12
Ash Singh	Continued work related to the animation feature by utilizing Ty's script for taking the image gradients	7	14
Joyeux Noel	Designed and revised schematics for the motorization of Lazy Susan	5	10
Mitchell Wadle	Designed and revised the preliminary schematics that will guide the Lazy Susan motorization process	5	10

Plans for Coming Week:

- Lazy Susan - Joyeux and Mitchell
 - Test the different motors and check the interface for motorizing the Lazy Susan

- This might take longer than planned due to the moving parts; and, if so, necessary adjustments to design will be made to aid in the calibration feature
- Animation - Ty and Ash
 - Write and test the scripts for the color mapping and animation feature and check if the rendering of the images takes place appropriately
- Calibration - Chris and Jacob
 - Continue working on the main calibration feature that will guide the tasks for the remainder of the semester, create a working implementation of coordinate conversion