EE / Cpr E / SE 492 - SDMAY 21 - 48
Learning Holiday Light Display
Week 3 Report

Feb 23, 2021 - Mar 1, 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

Weekly Summary:

The objective for the past week was to keep testing out the design and update the code such that the calibration procedure starts working successfully, and also the Lazy Susan gets motorized and incorporated into the calibration process. Also, we set out to get the animation of the LEDs working to go along with the calibration. The tasks that our team was able to accomplish include: redesigning the camera communication between the two Raspberry Pis, collecting and designing the Lazy Susan material, as well as configuring the pattern mapping procedure.

Past Week Accomplishments:

Mitchell:
Researched, collected and designed the materials to move forward with the the motorization of the Lazy Susan

Jacob:
Worked with Chris on implementing communication between the camera and the tree pi

Joyeux:
Worked closely with Mitchel to achieve the plans related to the materials needed for the Lazy Susan

Chris:
Began redesign of communication between camera and tree pi, assisted in redesign and early plan of lazy susan, worked with Ty on researching ways to streamline the startup process for the webserver

Ty:
Reconfigured the pattern mapping files to use the new json format, added the min and max values to the json file, and made outline for the animating process

Ash:
Revised the code for image processing and researched the various techniques for animating the LEDs with basic animation libraries

Pending Issues:

- Meet at the TLA again and figure out how to proceed with the TLA reservations for the rest of the semester, possibly move tree to SIC if rooms open
- Test the design of motorizing the Lazy Susan - Mitchell and Joyeux

Individual Contributions:
Note: The lower number of weekly hours for all the members is due to the reduced period for this status report (one week rather than the usual two)

Team Member	Contribution	Weekly Hours	Total Hours
Jacob Martin	Continued work on the calibration feature that will be used by Chris eventually	2	24
Chris Woods	Work regarding math formulation for optimization	3	29
Ty Gardner	Continued work related to the animation feature	3	25
Ash Singh	Continued work related to the animation feature	3	27
Joyeux Noel	Designed and revised schematics for the motorization of Lazy Susan	2	22

Mitchell Wadle	Designed and revised the preliminary schematics that will guide the Lazy Susan motorization process	2	22

Plans for Coming Week:
- Lazy Susan - Joyeux and Mitchell
  - Test the which motor is best suited for motorizing the Lazy Susan, and start adding the interface for controlling this functionality using the Tree Pi

- Animation - Ty and Ash
  - Break up the surface of the cone into 10 slices or faces and add a background image for the animation feature

- Calibration - Chris and Jacob
  - Continue working on the transmission of coordinates between the camera and the tree pi