WEEKLY REPORT 01

March 1 – March 8

Group number: 10

Project title: Learning Holiday Light Project

Client &/Advisor: Dr. Thomas Daniels

Team Members/Role:

Jacob Grace
Joseph Nunez
Thien Nguyen
Steven Williams
Valery Smith
Chad Griggs

Weekly Summary

(Short summary about what the group did for the week. This should be about a paragraph in length. These are just a few questions to help you get started. What was the overall objective for the week? In general, what tasks were completed? Were there any changes made to the project?)

This week work began on drafting the design document. A high-level design map was created that shows the full-system and how it is integrated. The biggest change made to the project was officially adding the Pi camera and a second Pi to control that camera. The power system was also wired up to allow in-place software testing in the coming months.

Pending Issues

(If applicable: Were there any unexpected complications? Please elaborate.)

Plans for Upcoming Week

(Please describe duties for the upcoming week for each member. What is(are) the task(s)?, Who will contribute to it? Be as concise as possible.)

The software team is going to group up and get the web server Pi up and running with a functional index page. By the end of next week we should have buttons on that page that will issue commands to the tree.
Continue working on the Light-strand code. Currently being reworked from scratch.
Other things to discuss is finalizing the calibration method (dual-cameras, image processing)
We should also discuss the container for the camera set-up.
We will also finalize the box wiring and internal component layout.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Jacob Grace	Continued learning python, trying to get the hang of integration with html/php. Continuing to search for the most appropriate software to use for image recognition. I learned about some methods that can use capture object in motion and create a 3d model from that. Although it may be out of the scope of this project. Also tried to use openCV with python and do basic image processing.	4	16
Joseph Nunez	Researched ways to create a password protected landing page for the pi that will enable users to run individual lights. We need to populate this page with HTML buttons that can be dynamically added per page (unless we have a static amount of lights) that can be toggled on and off. I've also been looking into ways of adding a text document upload to this site that will contain a pattern that the pi will parse and display.	4	11.5
Thien Nguyen	Sketched an initial idea for individual brightness calculation; as each LED takes full brightness. (Desired Lumen * RGB Values) Will need to talk to Jacob for more directions	2	11.5

	though. Report Organization; Will get to website update.		
Steven Williams	Soldered power system on perfboard, tested power to internal Pi, created BoM	6.5	17
Valery Smith	Created systems diagram of system that details each part of the system and how it interacts with other parts of the system, including what and how data is transferred between each part. I asked the team for feedback. I also updated the camera software to be hardware and software triggered. I tested it by taking pictures of the tree and re-familiarizing myself with ssh. I also filled in the design document with a template and assigned sections.	5.25	18.5
Chad Griggs	Began drafting of design document. Specifically, investigating hardware testing and other performance/compatibility tests	2.5	14