

Journal Report 8

10/27/19 - 11/10/19

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Period 2, White

Daily Log

Monday October 28

Began research on how to set up the interface between the Raspberry Pi, Camera, and Computer. Looked into primarily the wireless setup of the Raspberry Pi and the Computer.

Tuesday October 29

Continued looking into creating an interface with the computer, camera, and raspberry pi. Began the creation of my powerpoint presentation and script for my Syslab presentation on Thursday. Reached out to the Chess playing group to see what methods they had been using to transmit video feed from their cameras to the computer. Spent rest of period watching the SysLab Presentations.

Thursday October 31

Learned about a app called iPCamera that allows for openCV to use live video from the iPhone camera via Wifi connection. Chess playing group linked a tutorial for how to install iPCamera, began to look at that tutorial but didn't complete the install before we gave SysLab presentations for the rest of the period.

Wednesday November 6

Completed the ipCamera install, but encountered issue where no video feed was showing up when I entered the local host address. The ball tracking code gives an error that says the video link cannot be found. Consulted the Chess Playing group once more for potential causes of this issue.

Thursday October 24

Switched over to the personal hotspot for video broadcast and the code no longer produced the error above. School Wifi does not allow for access to the ipCamera local host domain. Encountered another error where the code was hanging while processing the video, but was able to debug and fix the issue. With the school Wifi, the ipCamera's transmission time is extremely laggy, 2-3 seconds behind realtime. Experimented with changing the resolutions and frames per second to try to remedy the issue.

Timeline

Date	Goal	Met
Today minus 2 weeks	Research and set up camera	Yes, I completed setup of the camera
Today minus 1 weeks	Install OpenCV and write basic program using camera	Yes, I completed the install of OpenCV, but didn't get the chance to write a program
Today	Wirelessly obtain video feed from phone to computer	Yes, I installed ipCamera and can transmit video.
Today plus 1 week	Learn how to control motors through the GPIO pins	
Today plus 2 weeks	Wirelessly send signal from computer to the Raspberry Pi	

Reflection

More progress is being made on the setup of this interface, and it is helpful to have a clearer image of what this final product will look like while I am working. Khushi and I hope for the chassis and remaining motor equipment to be in order within the next couple of weeks so that we can begin testing with the physical Perplexus. Overall, we are looking forward to seeing the successful connection of the motors with the camera and computer.