EE/CprE/SE 491 WEEKLY REPORT 2
10/06/2019-10/13/2019

Group number
sdmay20-40

Project title
IC Chipz

Client & Advisor
Dr. Henry Duwe

Team Members/Role
Andrew Kicklighter - Mobile Developer
Alexander Weakland - Mobile Developer
Nicholas Dykhuizen - Machine Vision Developer
Justin Elsbernd - Machine Vision Developer
Joshua Heiser - Embedded Developer
Paul Kiel - Embedded Developer

Weekly Summary

     This week we delved into our own work, each team making strides in their own modules to work toward next weeks integration of the entire system. Early integration is key with any complex multi component system so the goal this week was for each subteam to do the work they needed to have a modular piece of the system that can be integrated as part of next week.

     Since we now have a working simple mobile application thanks to the dev teams work this week and a working system for recording video due to the embedded team, there is now a means to connect the parts to create a simple data collection pipeline.

Past week accomplishments
- Create Base Mobile Application - Andrew & Alex
  - Imported past team's code into mobile application
  - Ensured that the mobile application can be compiled and ran
- Jetson Network Connectivity - Nicholas
  - Corrected firewall rules
  - Installed SSH and determined network name
  - Updated system
- Commented Past Team's Code - Andrew & Alex
  - Took the previous team's mobile application that was poorly documented and commented the code base
  - Began to further understand the previous teams code
  - Began the process of adding an iOS version as the previous team's application was Android only
- Created Application icon/logo - Andrew
  - Created a logo/application icon for aesthetics
- Reviewed Past Team's Computer Vision Program - Justin
  - Digested parts of past team's computer vision program to determine what needs to be changed
  - Researched other computer vision languages to compare
- Fixed some GUI issues on jetson board and figured out video recording - Paul & Josh
  - Gui on board was messed up when we turned it on so we fiddled with it for a couple hours trying to fix whatever got corrupted, found a temporary solution that at least lets us work on stuff.
  - Figured out how to run bash commands that save video.
  - Wrote test scripts to show that video can be autonomously started and stopped, these scripts can be called within a program to save video clips to a given directory for processing.

Individual Contributions

Name	Individual Contributions	Hours this Week	Cumulative Hours
Andrew Kicklighter	Create Base Mobile Application Commented Past Team's Code Created Application icon/logo	4	11
Alexander Weakland	Create Base Mobile Application Commented Past Team's Code	3	10
Nicholas Dykhuizen	Fixed Jetson board connectivity issues Installed and configured SSH	3	10
Justin Elsbernd	Researched WiFi communication Reviewed past project computer vision	3	10
Joshua Heiser	Fixed some GUI issues on jetson board and figured out video recording	5	14
Paul Kiel	Fixed some GUI issues on jetson board and figured out video recording	5	14

Pending Issues

None at the moment

Plans for the upcoming week

- Connect the mobile application to the Nvidia Jetson Board - Andrew & Alex

- - Implement peer to peer wifi between the mobile device and the embedded Nvidia Jetson board
- Create a simple program to record footage based on clicks - Nicholas & Justin
- Create wifi hotspot for ease of use on the jetson - Nicholas
- Add iOS to mobile application platform support - Andrew & Alex
  - Currently our Xamarin project is only set up for Android, set it up so that it will work with iOS as well
  - Rewrite Android specific code for iOS
  - Ensure that the application compiles and runs on iOS
- Work with computer vision team to work out application that will start/stop video data collection - Paul & Josh

Summary of weekly advisor meeting

Dr. Duwe gave us a solution to a problem embedded team was having with scripts. Embedded team also informed him of the difficulties with the GUI and the attempts made to fix it. Mobile team talked about the development environment they are using and justified why they are using and debugging it in the way they are. Dr. Duwe was overall satisfied with the teams progress and gave us a couple tasks and goals to work on. First being get the old teams system up and running and the other to figure out the best way to store the board and or leave it plugged in 24/7 so all team members have network access to it.