SDMAY18-37 - System and app for managing general faculty/staff parking on ISU campus
Advisor: Ahmed E. Kamal

Donavan Brooks: Backend Lead
Derrick Lockwood: Team Lead
Joseph Krajcir: Quality Assurance
John Ingwersen: Mobile Master
Riley Snyder: Webmaster
Mason Schreck: Communications Lead

Weekly Summary:

Past Week Accomplishments:
Donavan Brooks: I began to set up the docker container that we are going to use for our python environment.
Derrick Lockwood: Finished rough training method. Got to 77% accuracy. Made an accuracy method.
Joseph Krajcir: Created a basic app in React Native to query TestLot in our FirebaseDB and dynamically display spot availability.
John Ingwersen: Successfully running React Native and created test applications.
Riley Snyder: Completed image slicing and script to move documents between pre-post processing. Can pull bounding boxes from firebase.
Mason Schreck: Created an error handling email that will receive notifications of any pre-processing issues (loss of connect, inability to find Firebase data, inability to locate Pi serial number etc.). Tied this error capability into the connection uptime check and serial number communication.

Pending Issues:
Donavan Brooks: Finishing the predictor model and the Docker container.
Derrick Lockwood: Training time takes a long time. Might figure out how to compile with cuda and run the training on my GPU (And thus be able to apply this to our post processing machine).
Joseph Krajcir: Trying to display list of parking lots in FirebaseDB, which will allow you to select a lot and check the parking availability in the selected lot.
John Ingwersen: Learn React Native and integrate it with Google Firebase.
Riley Snyder: Just need to publish the final locations and names of the images so they can be fetched for post processing.
Mason Schreck: Need to work with Riley in development of pre-processing CLI to lock in where each command needs to be ran and how we want to tie these projects together.

Individual Contributions:

Name	Individual Contributions	Hours This Week	Hours Cumulative
Donavan Brooks	Began setting up the Docker container we are going to use to compartmentalize our projcet	4	37
Derrick Lockwood	Training model rough draft complete	8	55
Joseph Krajcir	Queried FirebaseDB and display parking availability	5	27
John Ingwersen	Installing and running/testing React Native to set up for our project	6	28
Riley Snyder	Finished Image splitting/moving	6	31
Mason Schreck	Finished Raspberry Pi pre-processing registration and error reporting	5	26

Comments and extended discussion:

Plan for coming week:
Donavan Brooks: Finish setting up our Docker container and finish the predictor model in Tensorflow
Derrick Lockwood: Figure out how to compile with cuda and run tensorflow on the gpu instead of cpu. Document the steps to make this happen so it can be applied to any system.
Joseph Krajcir: Finish basic app that will display all lots in FirebaseDB, and upon selection of a parking lot, display parking availability. Start looking at integrating a map view. Contribute to v2 of the Project Plan
John Ingwersen:Continue to work with React Native and learn how it can be useful. Finish Project plan for advisors to look at.

Riley Snyder: Fix image cutting to reflect the fixed firebase layout, and create metadata files fro images. Contribute to Project Plan v2.
Mason Schreck: Finish pre-processing cli to drive image capture (if we have a camera), spin off our connection and uptime checks, and tie this together with Riley.

Summary of weekly advisor meeting:
We will need to finish the revision of the Project Plan by Wednesday evening so it can be reviewed before Dr. Kamal leaves on his trip. His other senior design team switched to cordova from react native, so we might need to look into that option as well to be sure we use what is right for us. Our biggest issue right now is getting the docker container set up. Once this is done we can set up the environment anywhere. We are also meeting tomorrow to discuss equipment purchases and work on the Project Plan v2.