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:
We finally built a solution to get rid of the black boxes on images to improve the detector accuracy, but we still have a bug to work out that is affecting a few images.

Past Week Accomplishments:
Donavan Brooks: Updated dataset to images that do not have black borders, hopefully increasing the accuracy of our model. Also fixed edge case, that caused 4 image splits to completely crop out.

Derrick Lockwood: Added Early Stopping technique to model. Abstracted creation of model to config. Worked with Don and Riley on training using the ones that don't have black borders.

Joseph Krajcir: Helped finalize app. Researched ways to secure our database so our back end and front end have proper read/write permissions.

John Ingwersen: Finished mobile application with all new features integrated into master branch.

Riley Snyder: Implemented new image formatter that transforms images into squares with no black boxes. Working though post processing setup scripts.

Mason Schreck: Finished the website PoC and the maintenance notifications and once again modularized the website by splitting functionality between components.

Pending Issues:
Donavan Brooks:

Derrick Lockwood: Memory on box is maxing out on each GPU when running early stopping technique.

Joseph Krajcir: Need to figure out how to differentiate authentication between front end and back end

John Ingwersen: Deciding which app store we want to upload to initially. Moving codebase to our own repository.

Riley Snyder: none.

Mason Schreck: Design decisions and project commercial.

Individual Contributions:

Name	Individual Contributions	Hours This Week	Hours Cumulative
Donavan Brooks	Updating dataset. Fixing edge case	5	120
Derrick Lockwood		6	150
Joseph Krajcir	Finalized mobile app. Researched authentication for security	4	118
John Ingwersen	Finishing mobile application	10	125
Riley Snyder	Image Transform, Post Processing	9	126
Mason Schreck	Finished website and more design based decisions	4	123

Comments and extended discussion:

Plan for coming week:
Donavan Brooks: Fill for whoever needs help

Derrick Lockwood: Continue to optimize the early stopping technique and model abstraction.

Joseph Krajcir: Authenticate front end and back end, and secure our database

John Ingwersen: Begin submitting application to either google play or app store.

Riley Snyder: Make progress on post processing scripts.

Mason Schreck: Project commercial and looking into GoFundMe.

Summary of weekly advisor meeting:

We met with Ahmed for a wrap-up. We scheduled a meeting with Mark Miller to talk about moving forward with our design to be implemented on ISU campus further down the line. We also discussed what would we would like to do with the project after this semester. We decided that some of us are going to continue working on it to produce a solid prototype.