

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: Finished implementation of the predictor. Worked on building tensorflow using the GPU in my PC

Derrick Lockwood: Reviewed and managed merge requests, created documentation for build of tensorflow. Worked on trying to build it on my desktop. Worked on tensorboard implementation to view analytics of our model.

Joseph Krajcir: Have app connected to Cloud Firestore. Began looking at ways to make an overlay over a parking lot image.

John Ingwersen: Working with React Native to create a template application using Cloud Firestore.

Riley Snyder: Image processing issue finished. Moved onto starting cli. Moved stuff over to firestore.

Mason Schreck: Changed the pre-processing device registration from the original reactive database to the Firestore reactive database. Added logging to the pre-processing devices local filesystem. Began screen mockup to add to the next version of the design document.

Pending Issues:

Donavan Brooks: Try to get the model to train using the GPU, as well as look into ways in order to optimize our current model.

Derrick Lockwood: Finding a machine that can run the tensorflow gpu. Finding a post processing device that can do this.

Joseph Krajcir: Having issues with querying Cloud Firestore.

John Ingwersen: Getting Cloud Firestore to compile and run with React Native.

Riley Snyder: Not able to integrate device checking yet, can finish when Mason merges his branch.

Mason Schreck: Getting React Native running on an emulator (react cli deprecated to run android) / fallback to use a physical Android device

Individual Contributions:

Name	Individual Contributions	Hours This Week	Hours Cumulative
Donavan Brooks	Finished predictor model	9	52
Derrick Lockwood	More work with trying to get tensorflow with GPU installed	8	71
Joseph Krajcir	Connected to Cloud Firestore. Found module that may help create parking lot overlay.	7	40
John Ingwersen	Working with React Native to use updated real time database	8	43
Riley Snyder	Solved image splitting issue. CLI capable of performing splitting.	7	44
Mason Schreck	Updated the pre-processing device registration. Have React Native installed and running. Began mobile screen mockups	7	40

Comments and extended discussion:**Plan for coming week:**

Donavan Brooks: Try to get the model to train using the GPU, as well as look into ways in order to optimize our current model. Finalize the real-time detection, and maybe use the image splitting for testing.

Derrick Lockwood: Continue to get support for tensorflow gpu. Start on tensorboard. Work on optimization.

Joseph Krajcir: Fix Cloud Firestore querying and upload working version to the git repo. Start working on parking lot overlay.

John Ingwersen: Determine whether or not Cloud Firestore should be used over Firebase. React Native functionality is limited so this will be an important decision for the future.

Riley Snyder: Resolve image sending issue, continue to integrate that and Mason's device checking into cli.

Mason Schreck: Begin React Native development, design screens to use as a reference to build towards for the mobile application.

Summary of weekly advisor meeting: