

William Dickerson
Dr. Sung-Hyuk Cha
CS655 Research Project Update 3
29 November 2016

This week, we collected better images at night for training. These images have fewer traffic than our previous nighttime images, and because it wasn't raining, the focus is better. We are using the previous nighttime images, which have heavy traffic and rain, as "worst case" test questions.

More importantly, we tried two methods of combining the predictions from the main and selfie cameras, and saw some exciting results. They are summarized in this table:

Prediction method	Daytime accuracy	Nighttime accuracy
Front camera ONLY	0.75	0.53
Selfie camera ONLY	1.00	0.78
Front & Selfie via SUM	0.97	0.84
Front & Selfie via MAX	0.88	0.72

The daytime accuracy is based on 32 daytime test questions, and the nighttime accuracy is based on 32 nighttime test questions. The confusion matrices are available at www.github.com/wdickerson/locate/MATLAB

Next week, we hope to improve on the accuracy by investigating more advanced ways to combine the predictions from the two cameras, and perhaps by investigating new ways to classify the test questions.