Stuck in traffic (with computer vision)

Interested in a cutting-edge application of computer vision algorithms with social impact? Do you want to hone your ML skills while studying an important urban problem?

**Background:** Jakarta, Indonesia, is one of the cities with the worst traffic congestion in the world. On some routes, peak-time speeds crawl below 6 miles/hour Every. Single. Day.

**Project.** This project will collect and process real-time video feeds from thousands of cameras across Jakarta. The goal is to construct a detailed dataset of vehicle counts and types, by road segment. The final goal is to process the data using a model of the road network traffic equilibrium, and answer questions such as how shocks (accidents, road closures) affect traffic across the network.

**Challenge.** The computer vision challenge is to train accurate, scalable deep neural network classifiers that can be applied in near-real-time on thousands of cameras.

**You.** We seek an exceptional term-time RA to make an important contribution to this project. You will work closely with researchers and faculty at U Chicago, MIT and Harvard, to develop and launch this data collection effort.

The ideal candidate:
- Computer science major
- Familiarity with computer vision algorithms (e.g. YOLO, Mask-RCNN)
- Proficiency with python, command line
- Ability to build on existing code
- Keen attention to detail and perseverance
- Interest in economics, transportation and/or urban issues is a plus

Position details:
- Paid position.
- Start date: ASAP.
- Ideal commitment: 10 hours per week

To apply, email Gabriel with subject line “[RA computer vision]” with a CV and a short paragraph with your experience with ML (courses and projects), and an unofficial transcript.

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