CS 182 Project Update

Alexander Moore, Anupa Murali, and Elliot Silva

November 24, 2014

► User inputs city (a weighted, directed graph *G*) and number of vehicles *N*

- ▶ User inputs city (a weighted, directed graph *G*) and number of vehicles *N*
- ► Edge weights are max flows of edges

- ▶ User inputs city (a weighted, directed graph *G*) and number of vehicles *N*
- ► Edge weights are max flows of edges
- ▶ How to optimally place toll booths and traffic lights throughout city so as to maximize f(M, P)?

- ► User inputs city (a weighted, directed graph *G*) and number of vehicles *N*
- ► Edge weights are max flows of edges
- ▶ How to optimally place toll booths and traffic lights throughout city so as to maximize f(M, P)?
- ▶ Use stochastic variant of Ford-Fulkerson

- ▶ User inputs city (a weighted, directed graph *G*) and number of vehicles *N*
- Edge weights are max flows of edges
- ▶ How to optimally place toll booths and traffic lights throughout city so as to maximize f(M, P)?
- ▶ Use stochastic variant of Ford-Fulkerson
- Local search algorithms to determine where to place toll booths and traffic lights.

► Implemented City Interface

- ► Implemented City Interface
- ▶ Fixed number of vehicles (N), edge weights ($\{w_1, \ldots, w_m\}$), and probabilities

- ► Implemented City Interface
- ▶ Fixed number of vehicles (N), edge weights ($\{w_1, \ldots, w_m\}$), and probabilities
- ▶ Implemented simple Ford-Fulkerson algorithm

- ▶ Implemented City Interface
- ▶ Fixed number of vehicles (N), edge weights ($\{w_1, \ldots, w_m\}$), and probabilities
- ► Implemented simple Ford-Fulkerson algorithm
- ▶ Implemented hill climbing algorithm

Test City

