For my project, I plan to map car crash statistics at a citywide level. Speed, driver age, and socioeconomic background are all possible risk factor for traffic accidents. I will map several cities, time permitting, to see if the trends and correlations persist at different geographical locations. I’ll geocode the car accident locations and use leaflet to map them. The maps will contain several layers: a base census tract layer containing poverty and age information taken from the Census FactFinder, a streets layer created from a copy of ESRI’s Network Analyst dataset, and the car accident point layer.

The streets will be color coded according to speed. I will create buffers around the streets to account for slight discrepancies in the geographic projections, and create a new attribute for the crashes depending on their proximity to each speed of street.

The resulting web page will contain several maps, one for each city. Using leaflet, the user will be able to turn on or off certain elements: the streets by their speed, and crashes by their proximity to streets of a certain speed.

I will be analyzing the correlation of street speed limit, the area’s poverty level and percentage of population in the 15-25 (risky driver insurance cutoff) years age range to car crash frequency. I will also use the google API to create scatter plots to visualize the relationship of each factor, and a bar chart to compare amounts of car crashes in each city.

Car crash location data: <http://www.city-data.com/accidents/acc-San-Francisco-California.html>