APPLIED DATA SCIENCE

Project: *"Battle of Neighborhoods"* – Coursera Capstone Project

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Recommending Hospital Need in the near vicinity of high prone Accident Area

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Introduction / Business Problem

Abstract Idea: Many of the times we observed that due to lack of availability of hospitals in the close vicinity of high prone accident areas it takes lot of time for the patient to get immediate first aid in case of road accidents. This leads to loss of many lives due to the time taken to reach to the hospital.

This project aims to aid the user/government with choosing an ideal location for opening a new medical center or hospital in any city. It uses the data of all the accidents occurred in a target city or location on daily basis and check if there are adequate hospitals / medical facilities available nearby to the high prone accident zones. In case of no availability of hospitals / medical facilities within in specified distance it recommends opening a new hospital near that area.

This study uses Austin city's daily accident data statistics from the U.S. govt. website and identifies the top most accident-prone location. Now, using Foursquare API it checks the number of hospitals present near to that location. This model can be extended to any City / State.

Target Audience: The specific target users for this kind of application would include individuals / organizations / firms who are planning to open a new hospital of medical center. Also, it can be used to alert government authorities to recommend opening a new hospital in any location.

Based on this project, I have demonstrated 2 Use cases:

a) Among all the accident spots identified, taking the highest number of accident spots and identifying hospitals surrounding it.

b) K-means on all the coordinates (Latitudes and Longitudes) of accident areas.