A description of the problem and a discussion of the background

Background

Big Metropolis are the financial and cultural centers of modern day civilization. City planning is an essential aspect for any metropolis and residents. Since, these cities are ever-growing and changing, the people responsible to take care of the city need to keep up with the infrastructure needs of the city. One of the infra-structures that a city municipal corporation has duty to provide is fire-safety. In this regard, fire-stations play the key role. The locations and the numbers of fire-stations should be such that in fire calamities, quick and efficient deployment can be made. This would ensure minimization of life and property damages. One major business establishment that is at risk of fire-accidents are the restaurants. Restaurants work with fire and heavy duty electrical equipment in day-to-day business. The city planners need to keep track of the how restaurants are growing or decreasing in neighborhoods. Accordingly, they need to keep track of fire-stations that are in that area.

Problem

The main problem that we are addressing is how the restaurants in different neighborhoods in the city cluster with respect to the fire-stations that are in their proximity. The city we are looking at is Toronto which is a major cultural and financial hub of Canada.

Interest

First and foremost, this problem would interest the city-planners of Toronto. This would enable them to take preemptive actions necessary to avoid potential weak points in fire-accidents responses. For example, if in certain area there are too many restaurants, then the city might hold off on opening of new restaurants till they either establish more fire-stations or upscale the existing ones.