

Modeling Toronto Hospital Network Coverage Expansion

A dark blue diagonal gradient bar that starts from the bottom left and extends towards the top right, covering the lower half of the slide.

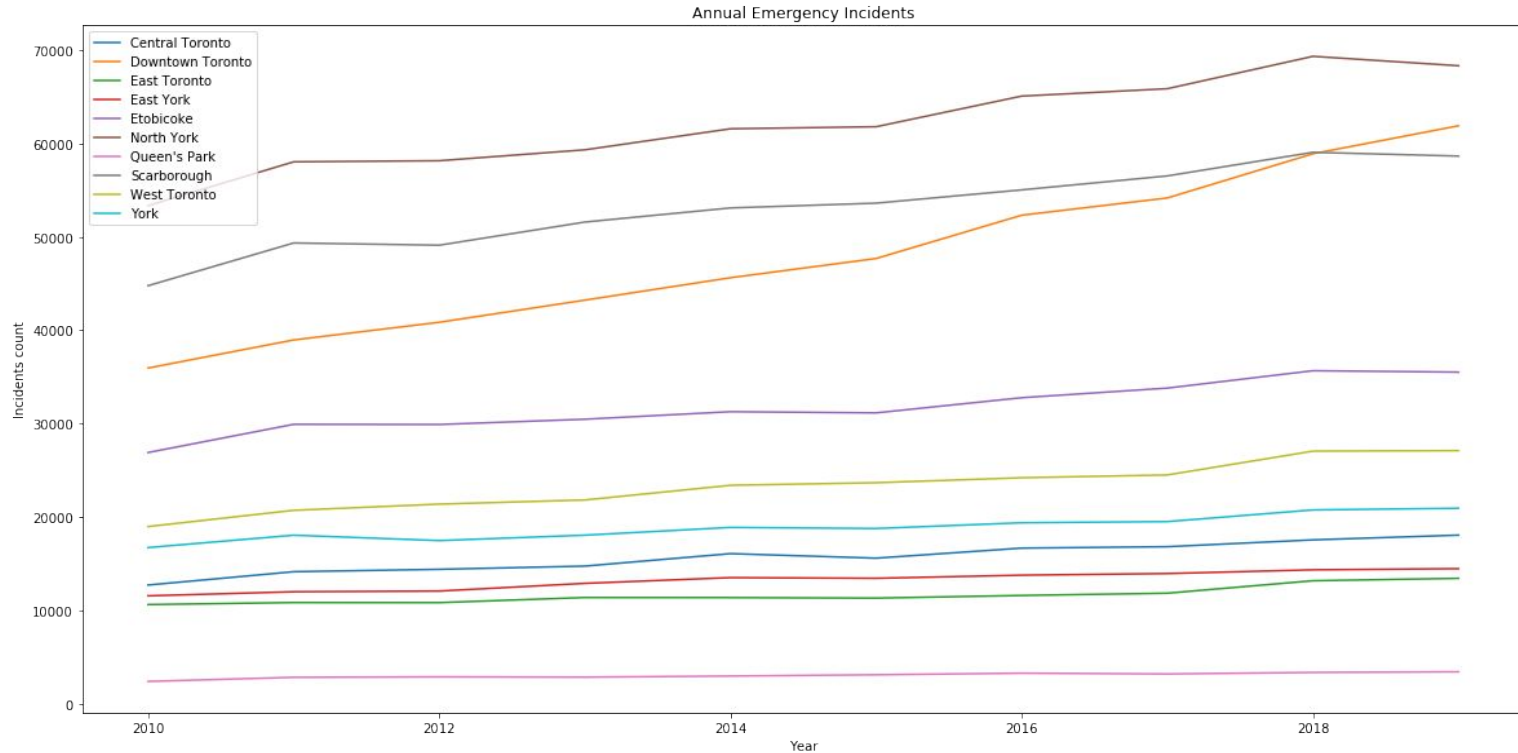
City Infrastructure Development Plan

- Toronto was the second fastest growing metropolitan area in the United States and Canada in 2018
- Emergency services are crucial for city development
- Prediction of growth will help City Council to plan infrastructure development

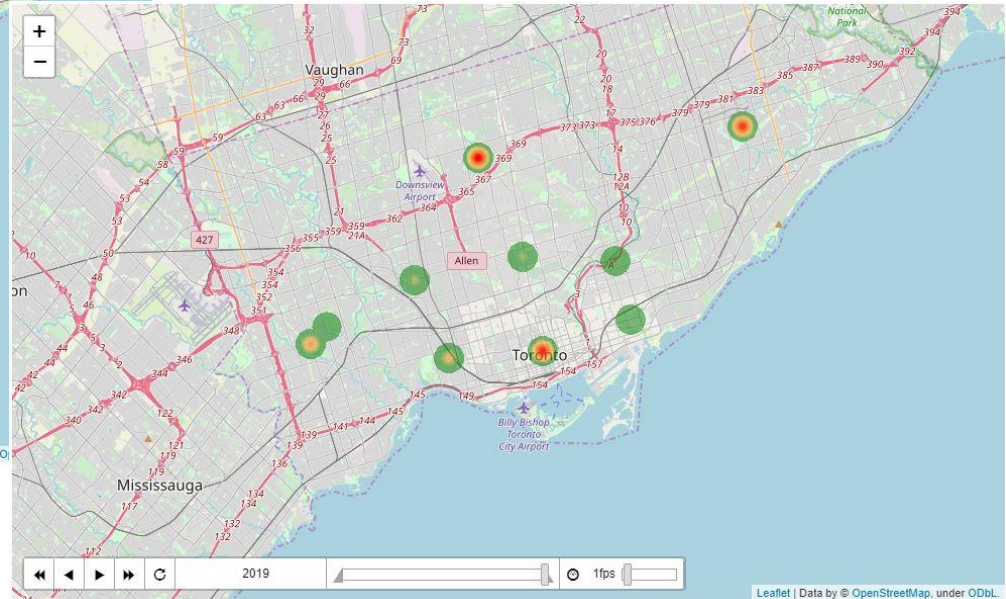
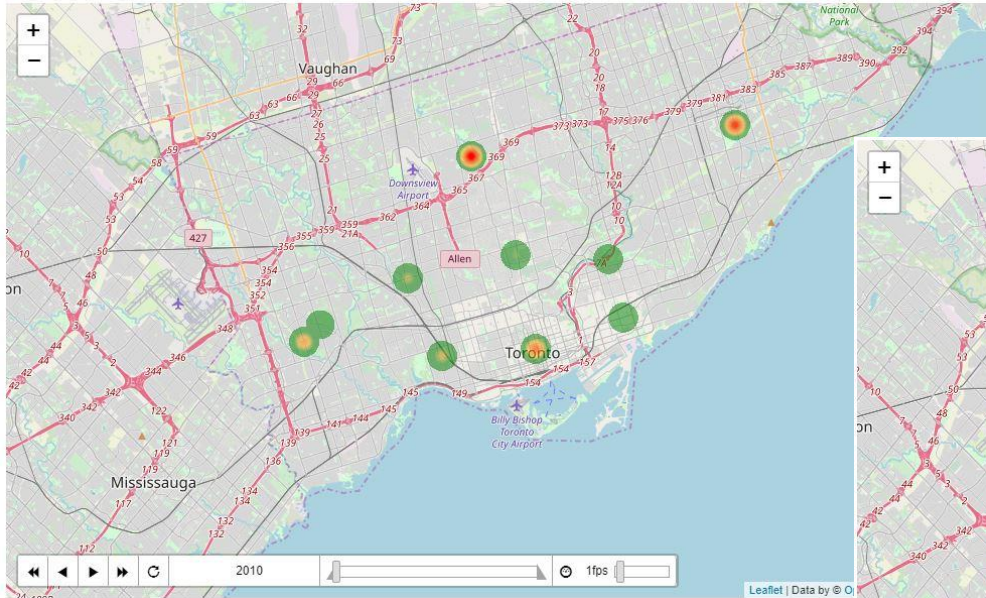
Data acquisition and cleaning

- Wikipedia - postal codes with Borough and Neighborhood data
- Toronto Open Data Portal - Emergency Incidents Data
- Foursquare - Emergency services location

Visual data analysis



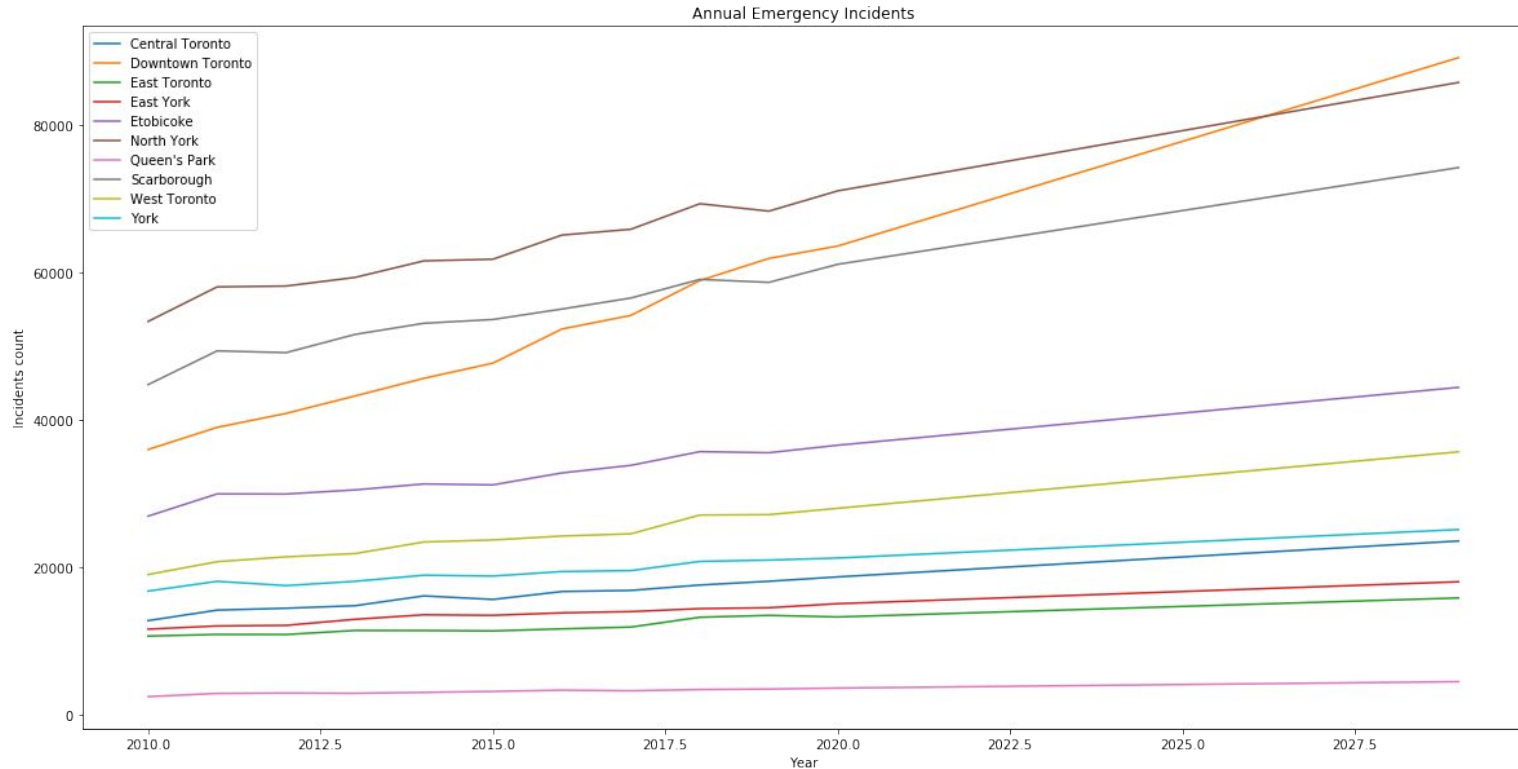
Visual data analysis 2010 vs 2019



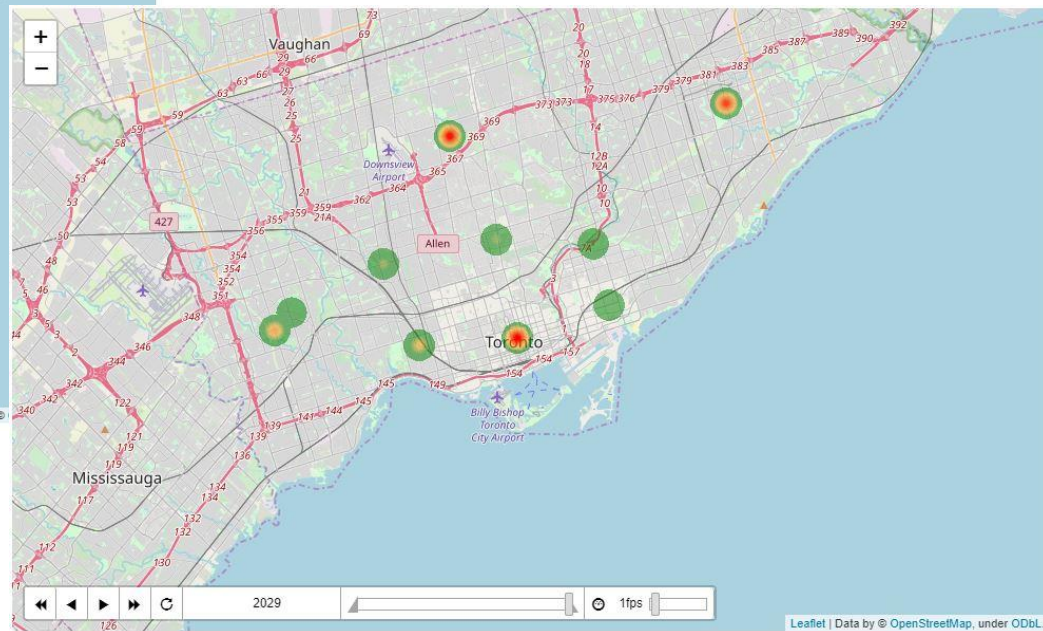
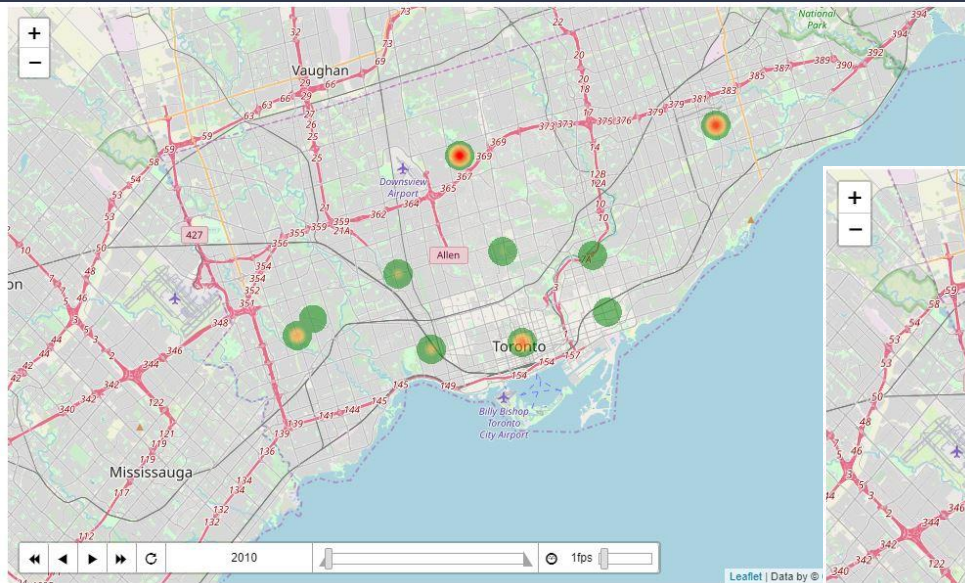
Prediction Model Selection

Linear Regression selected
as a result of data
observation

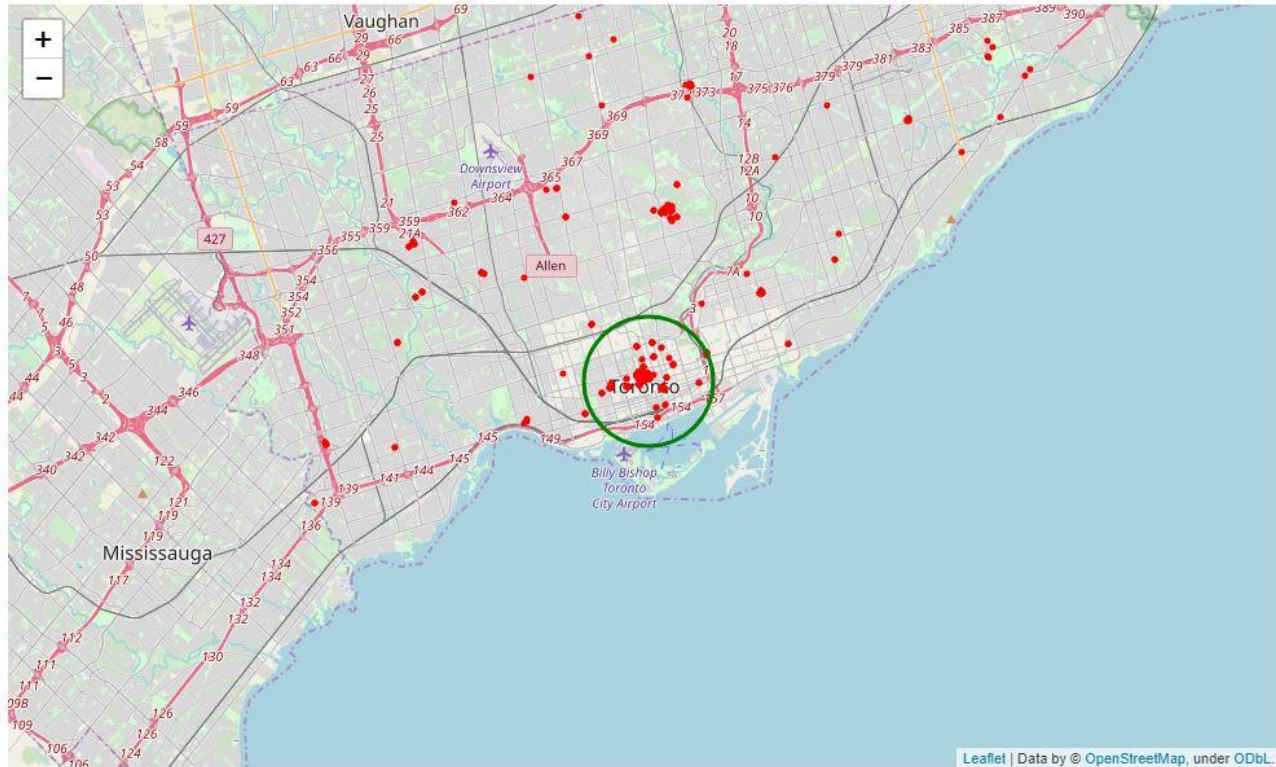
Growth prediction



Growth prediction 2010 vs 2029



Facilities location



Conclusion and further research

- Downtown Toronto emergency incidents count will outgrow all other boroughs by 2029
- Downtown Toronto have most emergency services
- Need to plan city infrastructure development accordingly
- Report can be fulfilled with emergency services capabilities and traffic data