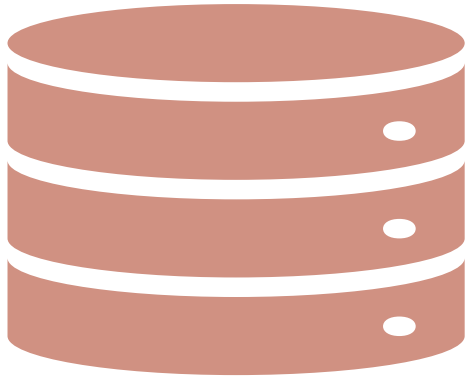

The Battle of Neighbourhoods

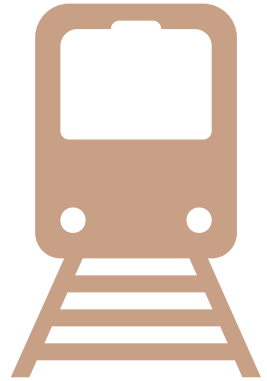
Background.

- Today, more people than ever live in a country other than the one in which they were born.
- In 2019, the number of migrants globally reached an estimated 272 million, 51 million more than in 2010.
- International migrants comprise 3.5 per cent of the global population. Canada is aiming to add 401,000 new permanent residents next year and 411,000 in 2022
- . It is important that immigrants have a good understanding of Canada should they decide to migrate there.

Problem



Data that may reveal similarities in the neighbourhood like latitude and longitude gotten from the Foursquare API.



The data is visualised to show congestion of popular spots like café and train stations.

Interest

- Prospective immigrants from several countries will be interested in knowing how Toronto mirrors their home country and how to be prepared for Canada.

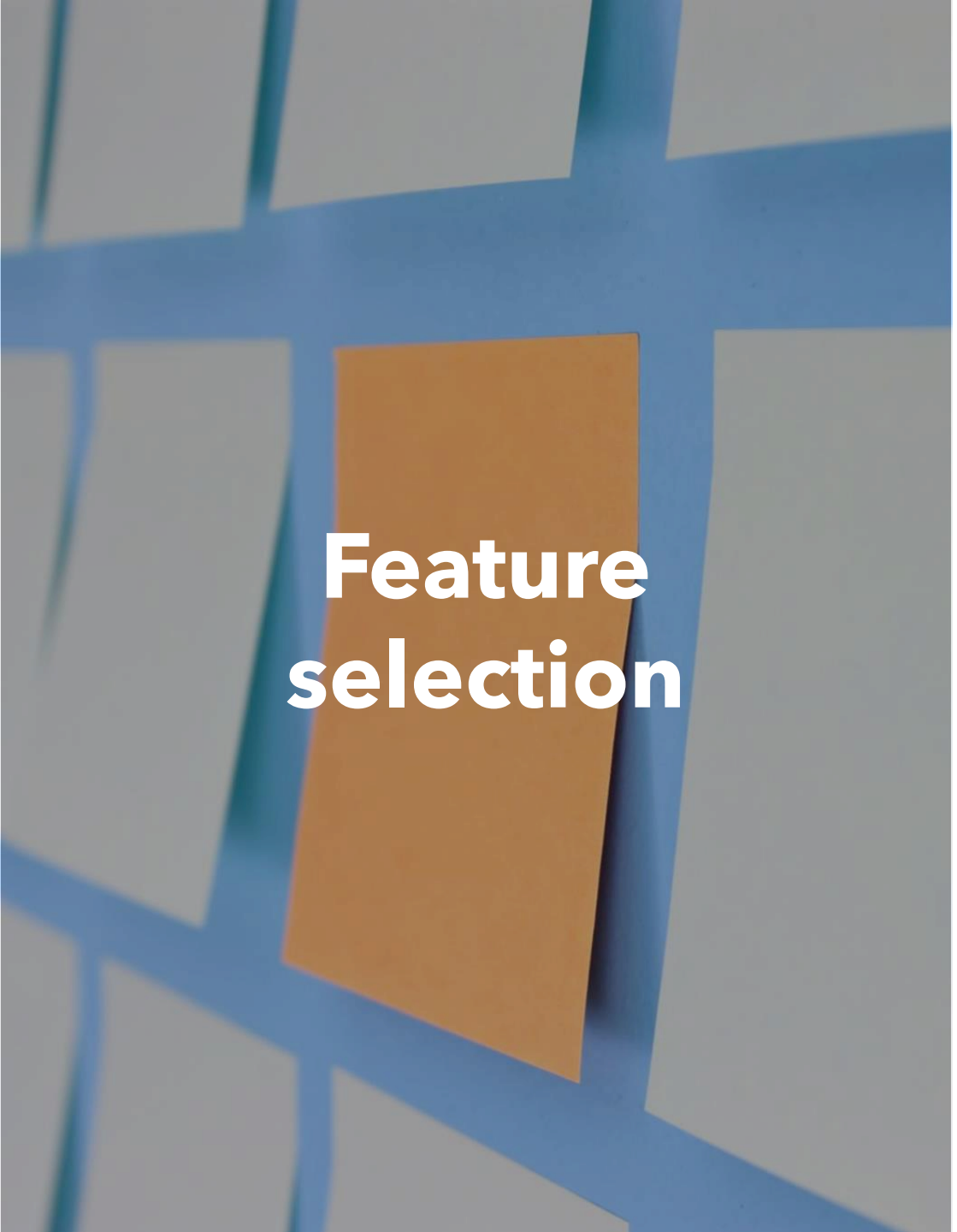
Data Acquisition and Cleaning

Data Sources

- The data for Canada postal codes, boroughs and neighbourhoods is sourced from a Wikipedia page https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M.
- The latitude and longitude of each borough and neighbourhood is gotten through the Foursquare API.

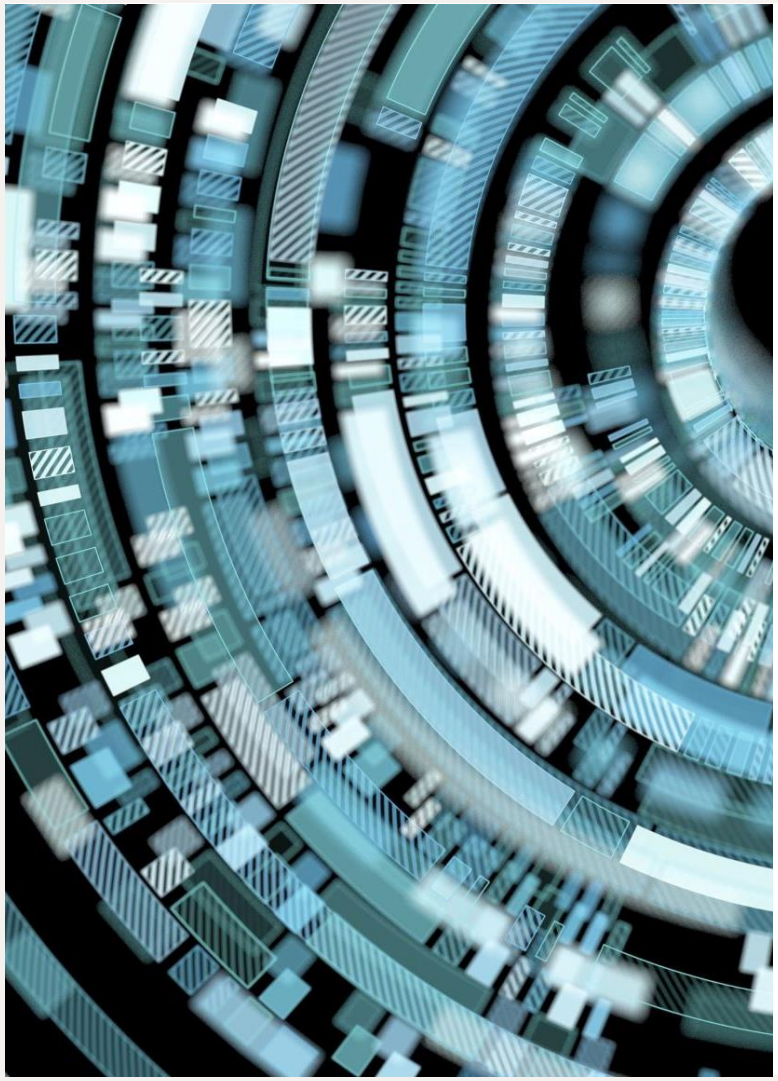
Data Cleaning

- Data downloaded or scraped from multiple sources were combined into one table.
- There were a lot of missing values from the Wikipedia page detailing the postal codes and boroughs. Postal codes with missing boroughs and neighbourhoods were removed.
- The resulting table was then merged with the latitude and longitude data gotten from the foursquare API.



Feature selection

- After data cleaning, there were 103 samples and 5 features in the data. There were no redundancy in the features.



Data Visualisation

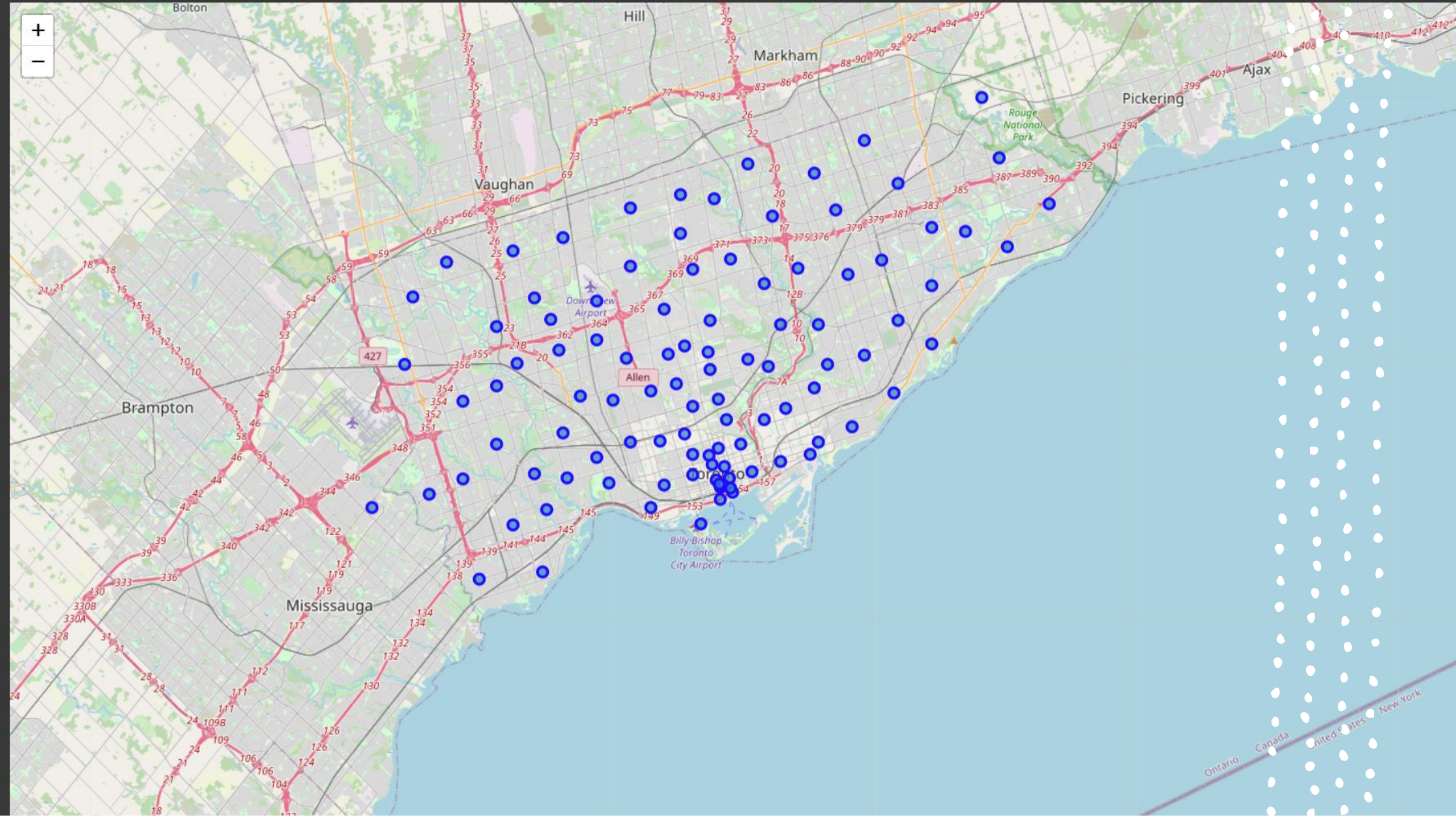
- **The data is visualised using the folium library to show locations and, by extension, congestion of the cities compared in the project.**

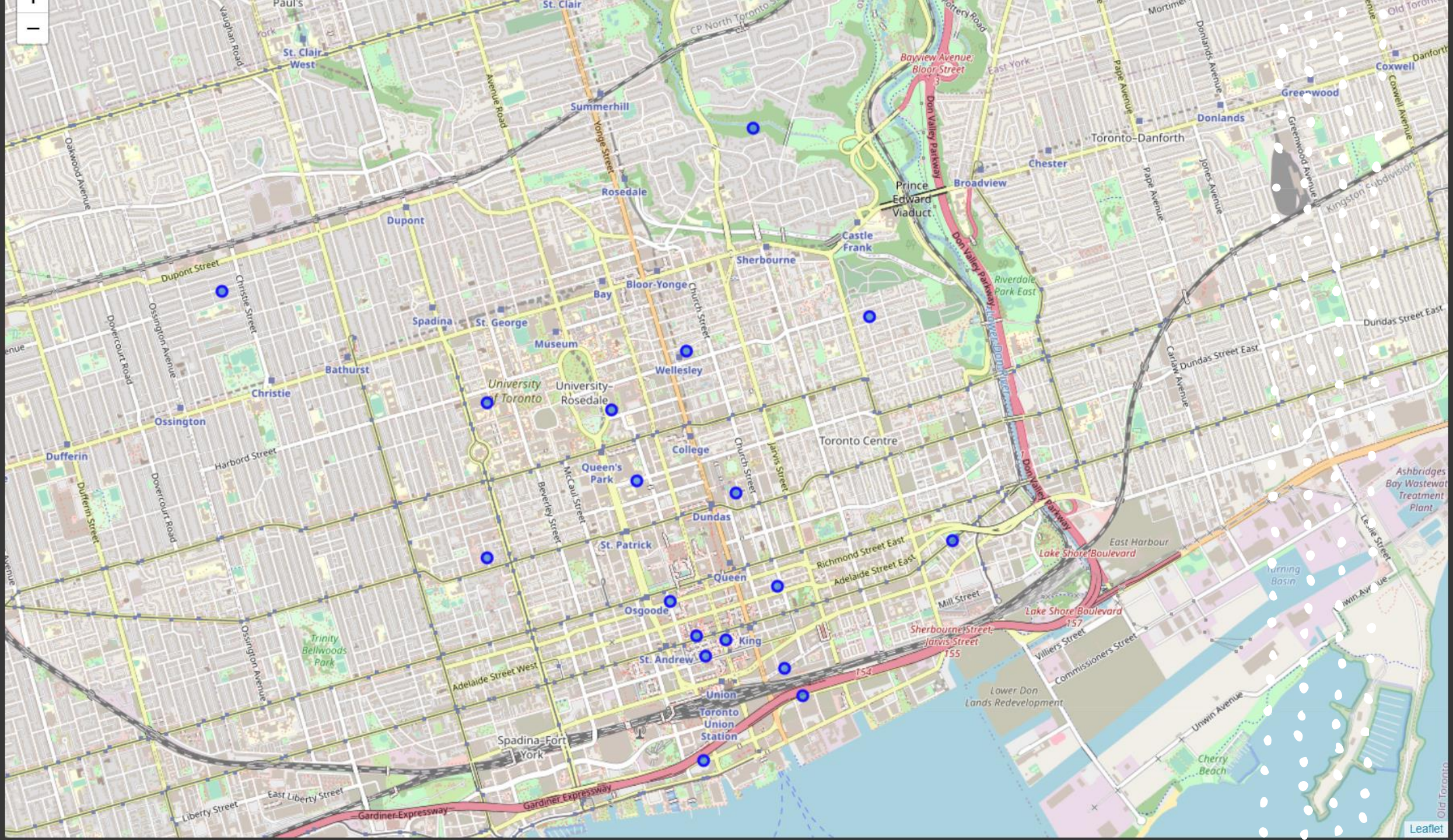
The maps

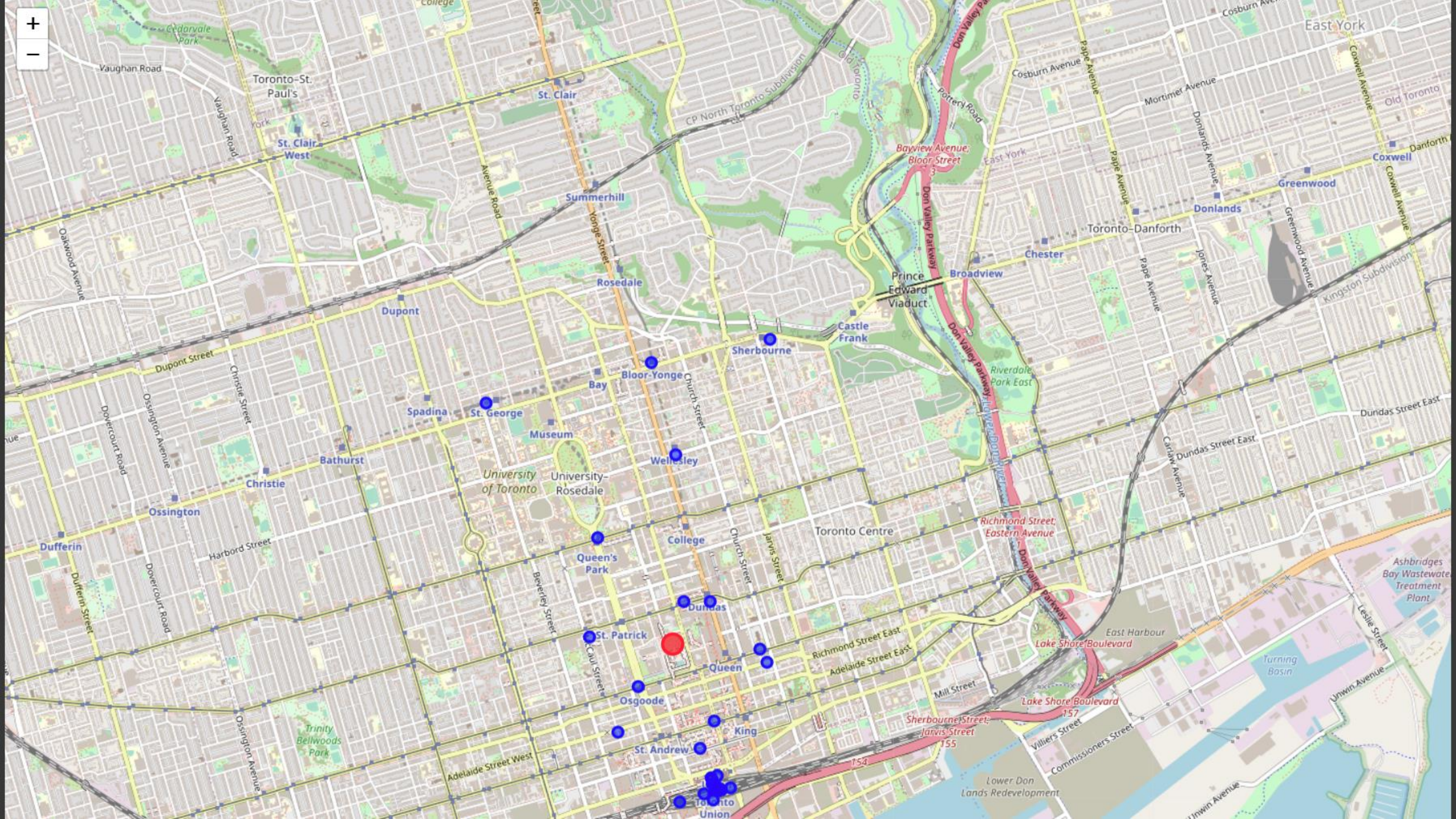
The first map shows Toronto and the several boroughs scattered across.

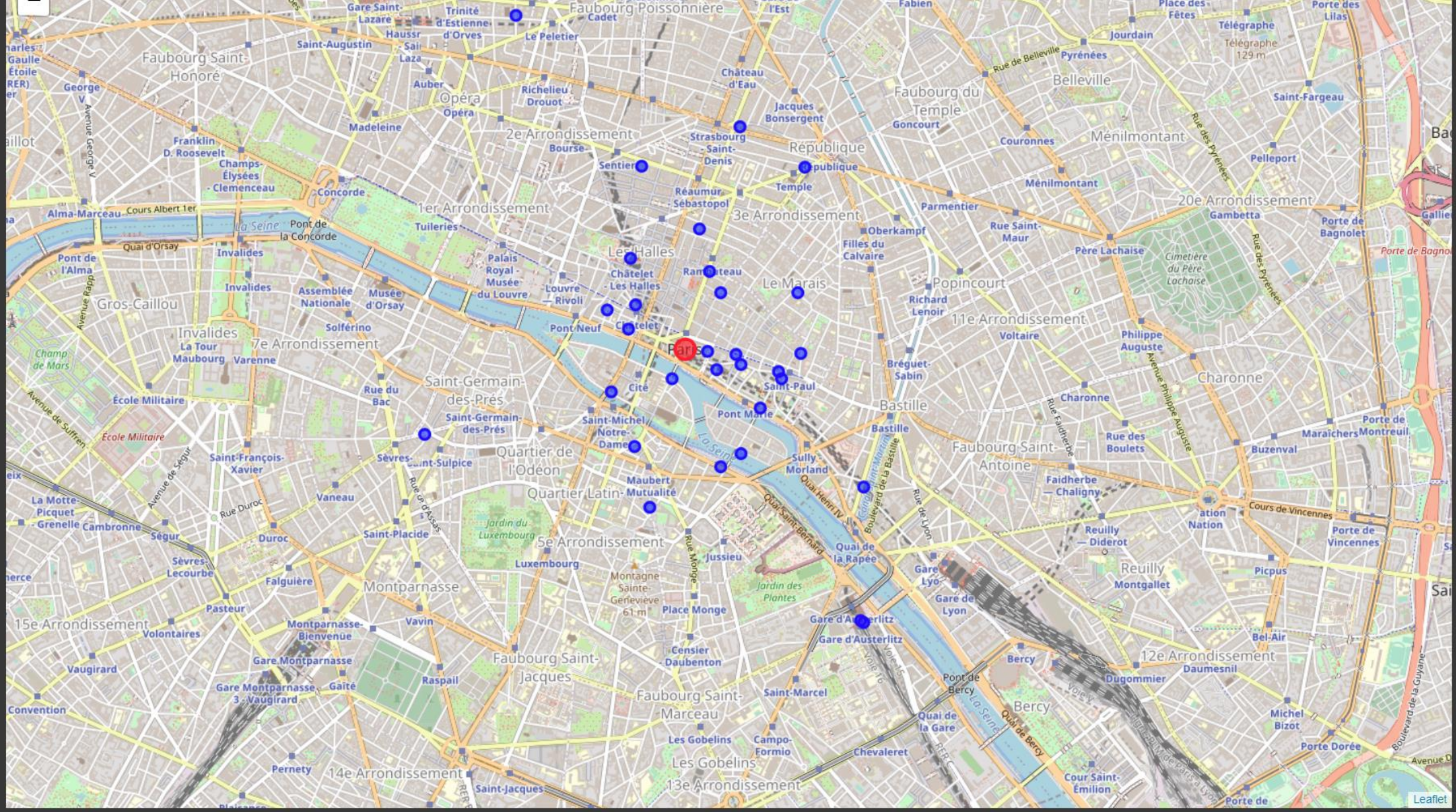
The second map looks at one borough, specifically Downtown Toronto, and the several neighbourhoods in it.

In the third map, we look more closely at Train stations are scattered across Toronto and compare it to Paris which is the fourth map.


Bolton
Hill
Markham
Ajax
Pickering
Rouge National Park
Vaughan
Downsview Airport
427
Allen
Brampton
Billy Bishop Toronto City Airport
Mississauga
Ontario
Canada
United States
New York


St. Clair West
St. Clair
Summerhill
Rosedale
Dupont
Dupont Street
Spadina
St. George
Museum
Bay
Bloor-Yonge
Sherbourne
Castle Frank
Prince Edward Viaduct
Broadview
Chester
Toronto–Danforth
Donlands
Greenwood
Coxwell
Bayview Avenue
Bloor Street
Don Valley Parkway
Riverdale Park East
Dundas Street East
Bathurst
Christie
Ossington
Dufferin
Harbord Street
University of Toronto
University–Rosedale
Wellesley
College
Queen's Park
Toronto Centre
Church Street
Jarvis Street
Dundas
St. Patrick
Queen
Richmond Street East
Adelaide Street East
Osgoode
King
St. Andrew
Adelaide Street West
Union
Toronto Union Station
Spadina–Fort York
Gardiner Expressway
Liberty Street
East Liberty Street
Trinity Bellwoods Park
Lake Shore Boulevard
East Harbour
Mill Street
Sherbourne Street
Jarvis Street
Villiers Street
Commissioners Street
Lower Don Lands Redevelopment
Unwin Avenue
Cherry Beach
Ashbridges Bay Wastewater Treatment Plant
Leaflet


Cedarvale Park
Vaughan Road
Toronto–St. Paul's
St. Clair
St. Clair West
CP North Toronto Subdivision
Old Toronto
Avenue Road
Summerhill
Yonge Street
Rosedale
Dupont
Dupont Street
Oakwood Avenue
Christie Street
Dovercourt Road
Ossington Avenue
Spadina
St. George
Museum
Bay
Bloor-Yonge
Church Street
Sherbourne
Castle Frank
Bathurst
Christie
Ossington
Dufferin
Dufferin Street
Harbord Street
University of Toronto
University–Rosedale
Wellesley
College
Queen's Park
Beverley Street
Jarvis Street
Toronto Centre
Dundas
St. Patrick
Queen
Richmond Street East
Adelaide Street East
Osgoode
King
St. Andrew
Adelaide Street West
Trinity Bellwoods Park
Toronto Union
Bayview Avenue
Bloor Street
Don Valley Parkway
Pottery Road
East York
Cosburn Avenue
Pape Avenue
Mortimer Avenue
Donlands Avenue
Coxwell Avenue
Greenwood
Donlands
Danforth
Toronto–Danforth
Chester
Broadview
Prince Edward Viaduct
Jones Avenue
Greenwood Avenue
Kingston Subdivision
Riverdale Park East
Dundas Street East
Carlaw Avenue
Richmond Street; Eastern Avenue
Ashbridges Bay Wastewater Treatment Plant
East Harbour
Lake Shore Boulevard
Turning Basin
Leslie Street
Unwin Avenue
Mill Street
Sherbourne Street; Jarvis Street
Villiers Street
Commissioners Street
Lower Don Lands Redevelopment
154
155
157


Faubourg Poissonnière
Faubourg Saint-Honoré
Opéra
2e Arrondissement
1er Arrondissement
3e Arrondissement
République
Faubourg du Temple
Belleville
Ménilmontant
20e Arrondissement
Les Halles
Le Marais
Popincourt
11e Arrondissement
Gros-Caillou
Invalides
7e Arrondissement
Saint-Germain-des-Prés
Quartier de l'Odéon
Quartier Latin
5e Arrondissement
Montparnasse
15e Arrondissement
Faubourg Saint-Jacques
Faubourg Saint-Marceau
13e Arrondissement
14e Arrondissement
Les Gobelins
Bastille
Faubourg Saint-Antoine
Charonne
Reuilly
12e Arrondissement
Bercy
Paris
Gare Saint-Lazare
Trinité d'Estienne d'Orves
Le Peletier
Saint-Augustin
Cadet
Château d'Eau
Strasbourg - Saint-Denis
Jacques Bonsergent
Couronnes
Pyrénées
Jourdain
Télégraphe
Saint-Fargeau
Pelleport
Gambetta
Père Lachaise
Cimetière du Père-Lachaise
Porte de Bagnolet
Porte des Lilas
Place des Fêtes
Rue de Belleville
Rue des Pyrénées
Goncourt
Parmentier
Rue Saint-Maur
Oberkampf
Filles du Calvaire
Richard Lenoir
Voltaire
Philippe Auguste
Avenue Philippe Auguste
Faidherbe — Chaligny
Rue des Boulets
Buzenval
Maraîchers
Porte de Montreuil
Bréguet-Sabin
Bastille
Sully-Morland
Quai Henri IV
Boulevard de la Bastille
Rue de Lyon
Quai de la Rapée
Gare de Lyon
Gare d'Austerlitz
Cours de Vincennes
Porte de Vincennes
Reuilly — Diderot
Nation
Picpus
Bel-Air
Montgallet
Daumesnil
Dugommier
Michel Bizot
Porte Dorée
Cour Saint-Émilion
Pont de Bercy
Quai de la Gare
Quai de Bercy
Voie Y
Voie 16
Voie 15
Saint-Marcel
Campo-Formio
Les Gobelins
Censier Daubenton
Place Monge
Jussieu
Montagne Sainte-Geneviève
61 m
Luxembourg
Jardin du Luxembourg
Jardin des Plantes
Saint-Placide
Rue du Bac
Saint-Germain-des-Prés
Saint-Michel Notre-Dame
Cité
Pont Neuf
Châtelet
Châtelet - Les Halles
Rambuteau
Réaumur - Sébastopol
Sentier
Bourse
Richelieu Drouot
Opéra
Auber
Madeleine
Franklin D. Roosevelt
Champs-Élysées - Clemenceau
Concorde
Pont de la Concorde
Tuileries
Palais Royal - Musée du Louvre
Louvre - Rivoli
Pont Marie
Saint-Paul
Maubert Mutualité
Sèvres-Saint-Sulpice
Saint-François-Xavier
Vaneau
Duroc
Ségur
Sèvres-Lecourbe
Falguière
Pasteur
Montparnasse-Bienvenüe
Vavin
Gare Montparnasse
Raspail
Gaîté
Gare Montparnasse 3 - Vaugirard
Vaugirard
Convention
Volontaires
Cambronne
La Motte-Picquet - Grenelle
Avenue de Ségur
Avenue de Suffren
École Militaire
Champ de Mars
La Tour Maubourg
Varenne
Solférino
Assemblée Nationale
Musée d'Orsay
Invalides
Pont de l'Alma
Alma-Marceau
Cours Albert 1er
Quai d'Orsay
Avenue George V
Avenue Rapp
Saint-Jacques
Pernety
Plaisance
Leaflet

Results

- The maps show varying similarities in the congestion of similar popular hotspots with Toronto and other cities like Paris.