



# Battle of Neighborhoods

Accessible housing for amputees

# Background

- The population of people with lower-limb loss has grown over the past decade in Canada
- Ontario has the highest percent of amputations
- This population needs accessible housing

# Background

- Having a **healthy diet** and maintaining an **active lifestyle** is important for this population
- The neighborhood in which they live can increase/restrict access to these amenities

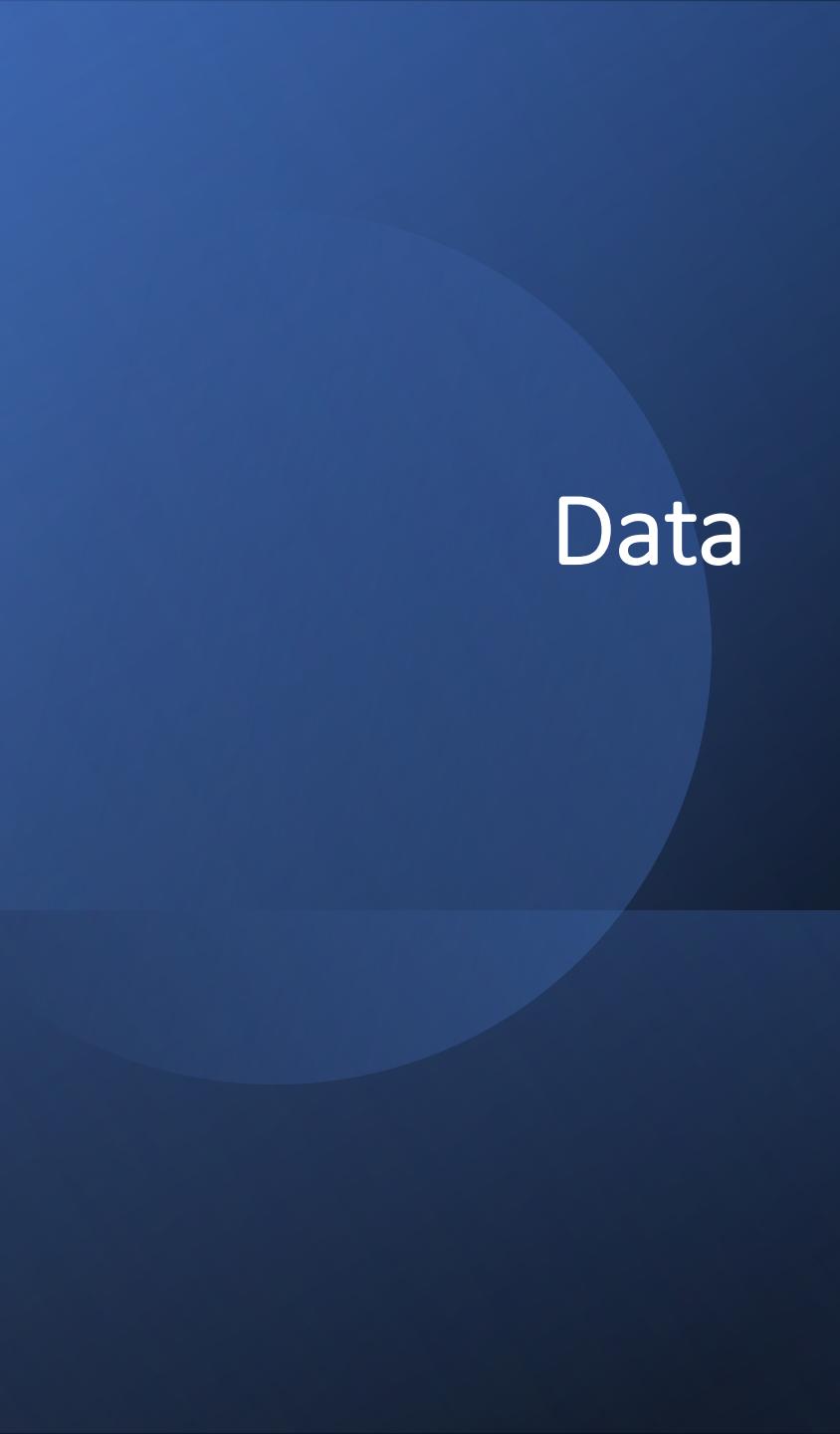
# Problem

The goal of this project is to compare and rate the neighborhoods in Toronto where lower-limb amputee people will have accessibility to healthcare, exercise, and a healthy diet.



# Interest

- 3 groups of stakeholders:
  - Patients.
  - The government.
  - Providers such as real estate agents.



# Data

- Geo coordinates
- Access to health care, fitness & healthy food, using Foursquare API
- Walkability scores [Wellbeing Toronto - Civics & Equity Indicators Catalog](#).
- Pedestrian safety index [toronto police service data Pedestrians](#).

# Methods (Data Cleaning)

- **Foursquare (Health care) :**
  - Keywords
    - healthcare, rehab, medical* and *Physical Therapist*
  - Grouped neighborhoods based on number of Health amenities

	Neighbourhood	Healthcare Score
72	University	41
81	Yonge-St.Clair	13
36	Kensington-Chinatown	13
17	Church-Yonge Corridor	11
5	Bay Street Corridor	11

# Methods (Data Cleaning)

- **Foursquare (Fitness) :**
  - Keywords
    - Fitness*
  - Grouped neighborhoods based on number of Fitness amenities

	Neighbourhood	Fitness Score
60	University	15
69	Yonge-St.Clair	13
39	Moss Park	12
3	Bay Street Corridor	12
43	Niagara	8

# Methods (Data Cleaning)

- **Foursquare (Healthy diet) :**
  - Keywords
    - healthy, organic, natural and vegetarian*
  - Grouped neighborhoods based on number of Healthy diet options

	Neighbourhood	Healthy Food Score
37	Trinity-Bellwoods	6
19	Kensington-Chinatown	6
7	Church-Yonge Corridor	6
3	Bathurst Manor	5
25	Moss Park	5

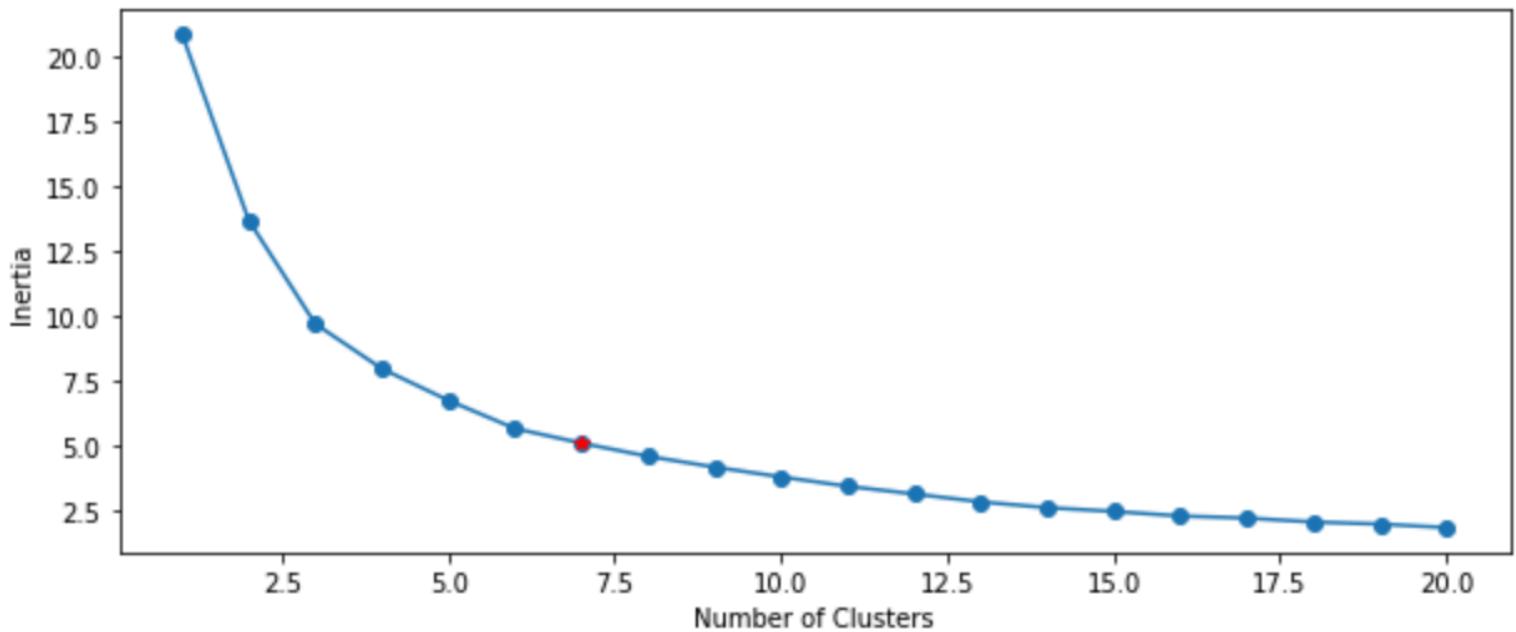
# Methods (Data Cleaning)

Combined all the information into a single data frame

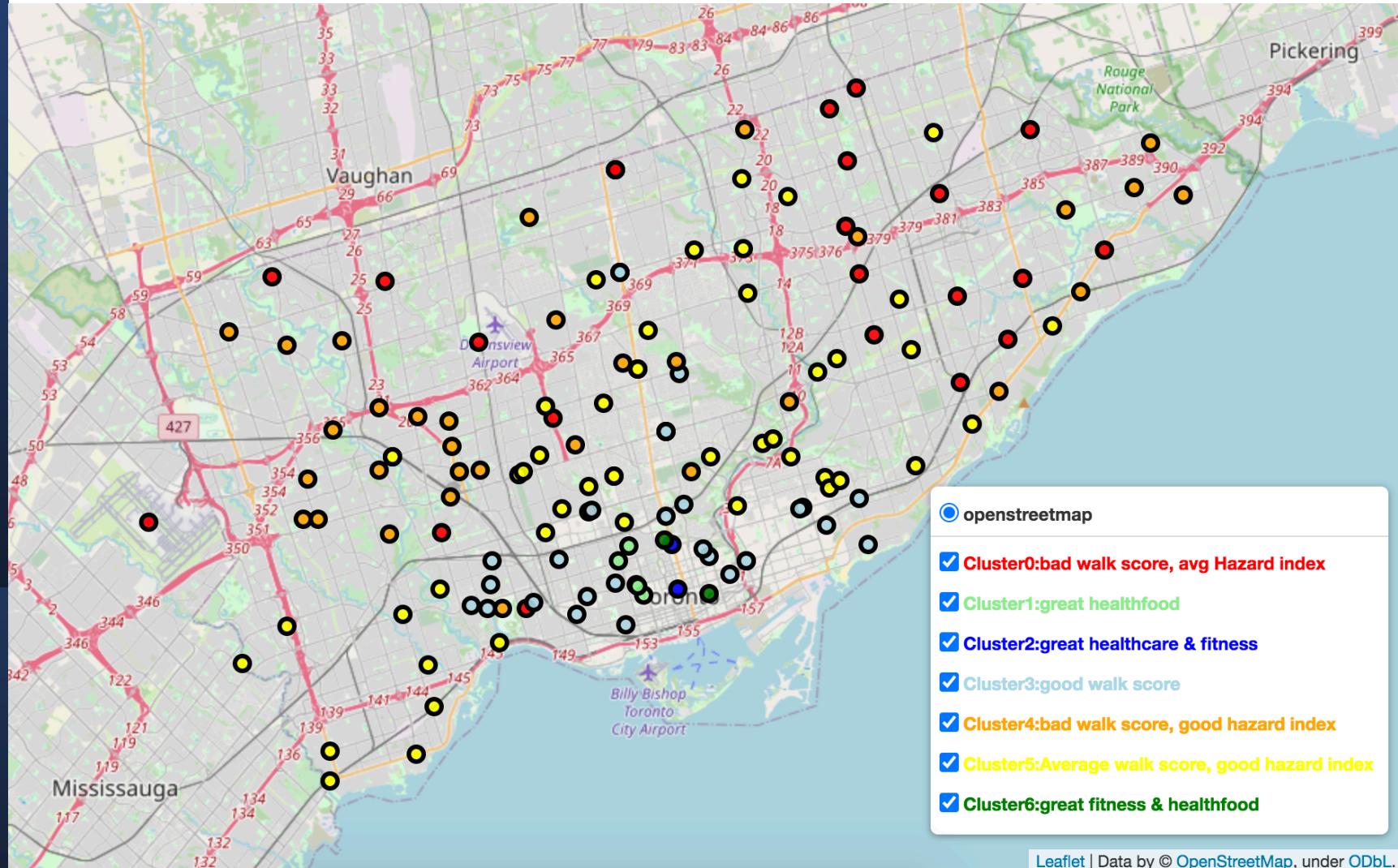
Neighbourhood Id	Neighbourhood	Walk Score	Hazard Index	Latitude	Longitude	Healthcare Score	Fitness Score	Healthy Food Score
135	136	West Hill	66	19	43.768914	-79.187291	4.0	0.0
136	137	Woburn	66	37	43.759824	-79.225291	3.0	1.0
137	138	Eglinton East	62	22	43.739465	-79.232100	2.0	0.0
138	139	Scarborough Village	70	7	43.743742	-79.211632	2.0	1.0
139	140	Guildwood	59	3	43.755225	-79.198229	0.0	0.0

# Methods (ML)

- K-means: Good unsupervised Clustering method
- Scaled data
- Used Elbow method to find number of Clusters



# Results



# Discussion

