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Welcome to Toronto!

A Neighborhood Recommender System



Background

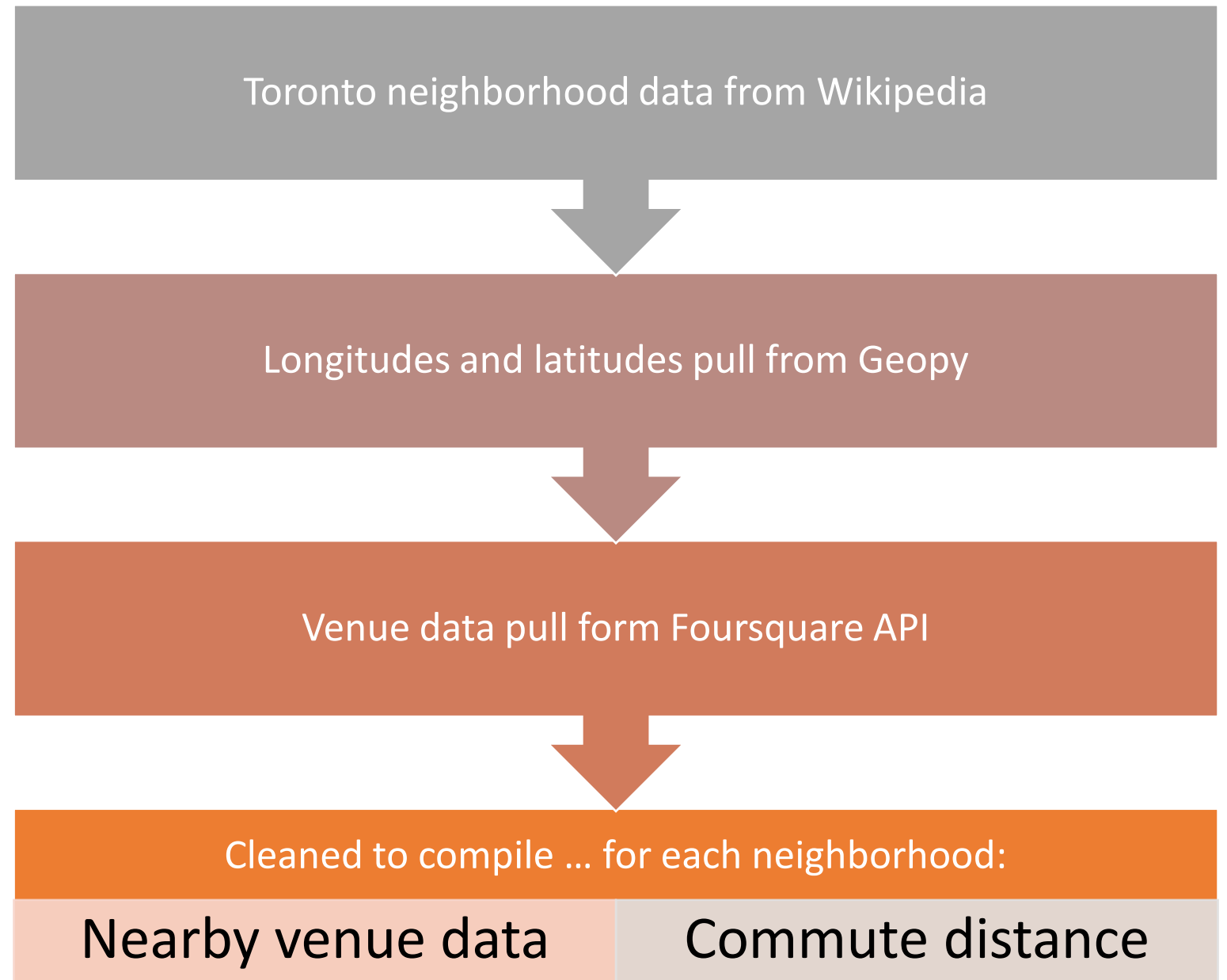
Navigating a new city is challenging

- New roads
- New job
- New house

A city can help by offering neighborhood recommendations for new residents

- Using previous neighborhood venue and former commute distance data
- Only need: former and future work address and former home address

Data source/clean



Exploratory Analysis

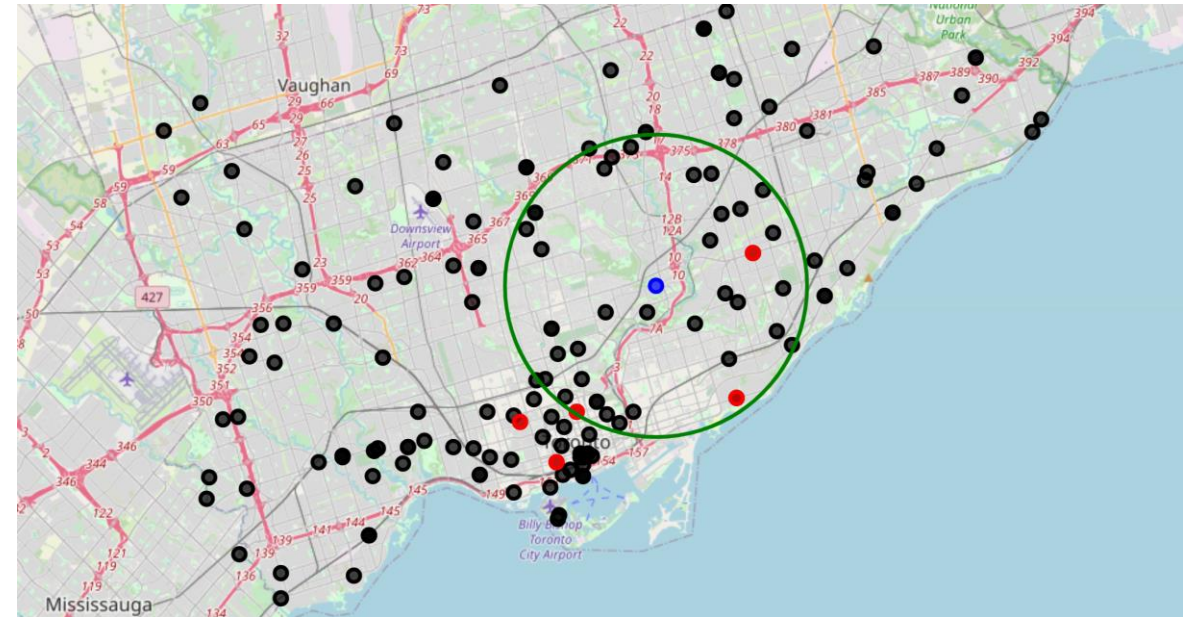
- K-Means (k=6) clustering of neighborhood data
- Demonstrates significant diversity between neighborhoods

Cluster Labels	Borough
0.0	3
1.0	46
2.0	52
3.0	6
4.0	4
5.0	51

Solution

- A content-based recommender system
- Calculates and ranks dissimilarity using Euclidean distances

	Neighborhood	Dissimilarity	Borough	Longitude	Latitude
0	Harbord	0.730818	Downtown Toronto	-79.414391	43.661512
1	Church and Wellesley	0.796968	Downtown Toronto	-79.383801	43.665524
2	The Beaches West	0.829269	East Toronto	-79.296712	43.671024
3	Golden Mile	0.839965	Scarborough	-79.287622	43.727841
4	King and Spadina	0.843752	Downtown Toronto	-79.394994	43.645456



Conclusion



Built useful recommender to help new residents of the City of Toronto find the right neighborhood for them



Recommendations can be improved with more rich input data