

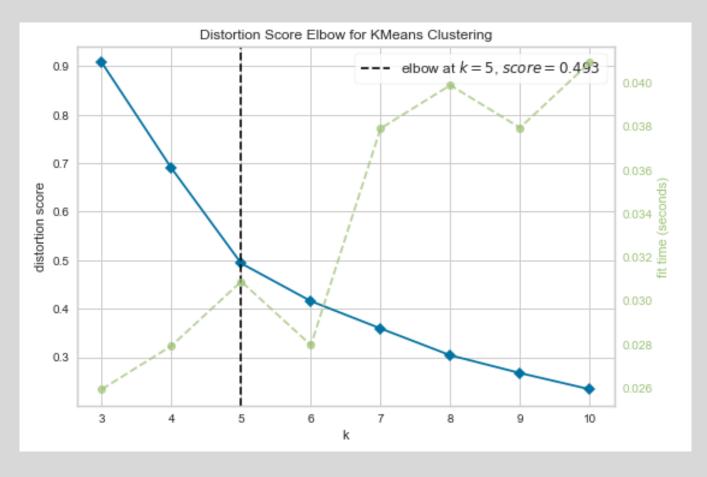
### Where to open a pastry shop in Toronto?

- Ontario has the strongest economy in Canada, contributing the highest GDP per capita in the country.
- Toronto, its capital, has one of the top food scenes in Ontario. As aspiring pastry chefs based in Toronto, we want to open our first Pastry shop here.
- Our Pastry shop concept focuses on products that go well with either coffee or tea.
- The product selection, for now, will focus on pastry products only.

### Data acquisition and preparation

- Postal codes, boroughs, and neighborhoods data for Toronto scraped from <a href="https://en.wikipedia.org/wiki/List\_of\_postal\_codes\_of\_Canada:\_M">https://en.wikipedia.org/wiki/List\_of\_postal\_codes\_of\_Canada:\_M</a>
- Coordinates per postal code from <a href="https://cocl.us/Geospatial\_data">https://cocl.us/Geospatial\_data</a>
- Neighborhood coordinates from the Geopy library. Postal code data refined into neighborhood-level coordinates. <include the number of neighborhoods>
- Establishment categorization and counts per neighborhood from FourSquare, focusing only on competitor or complementary industries including the following establishments:
   Bakery, Café, Coffee Shop, Donut Shop, Pastry Shop, Tea Room

## Choosing the best k for clustering



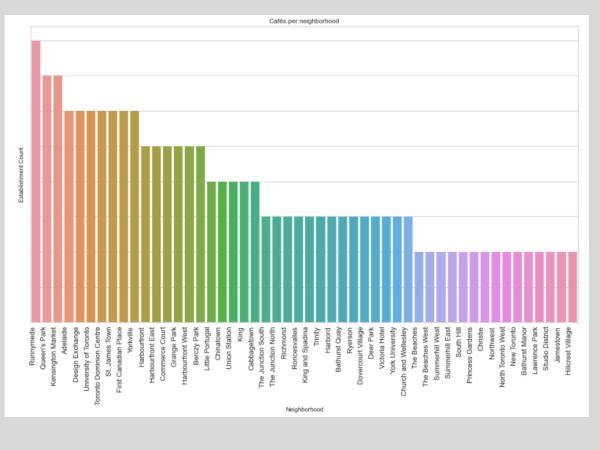
- Use K ElbowVisualizer
- Use K = 5

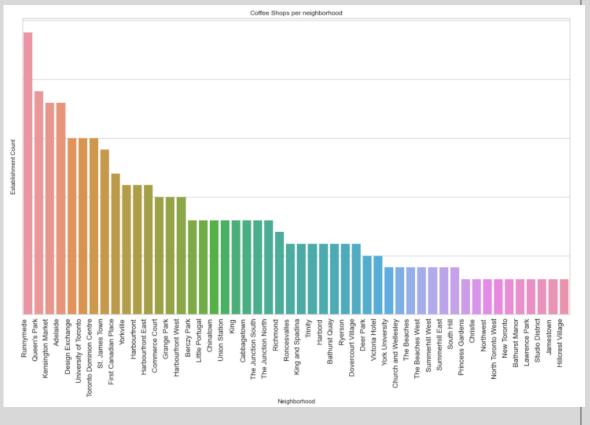
# Zero in on clusters with dense coffee shop or café presence

 As we are looking to enter areas packed with Coffee Shops, Cafés, or Tea Rooms, as they complement our products, and with minimal competition, Cluster 3 is of interest

Cluster Labels         Venue Category           0         Bakery         45         45           Café         54         82           Coffee Shop         74         60           Donut Shop         5         4           Pastry Shop         1         1           Tea Room         13         9           1         Bakery         7         7           Café         4         3           Coffee Shop         9         3           Donut Shop         3         2           Pastry Shop         1         1
Café       54       82         Coffee Shop       74       60         Donut Shop       5       4         Pastry Shop       1       1         Tea Room       13       9         1       Bakery       7       7         Café       4       3         Coffee Shop       9       3         Donut Shop       3       2         Pastry Shop       1       1
Coffee Shop 74 60 Donut Shop 5 4 Pastry Shop 1 1 Tea Room 13 9 1 Bakery 7 7 Café 4 3 Coffee Shop 9 3 Donut Shop 3 2 Pastry Shop 1 1
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Donut Shop 3 2 Pastry Shop 1 1
Pastry Shop 1 1
Tea Room 4 2
2 Bakery 8 7
Coffee Shop 1 1
3 Bakery 11 5
Café 15 29
Coffee Shop 36 25
Donut Shop 1 1
Tea Room 7 3
4 Bakery 1 1
Café 4 11
Coffee Shop 1 1

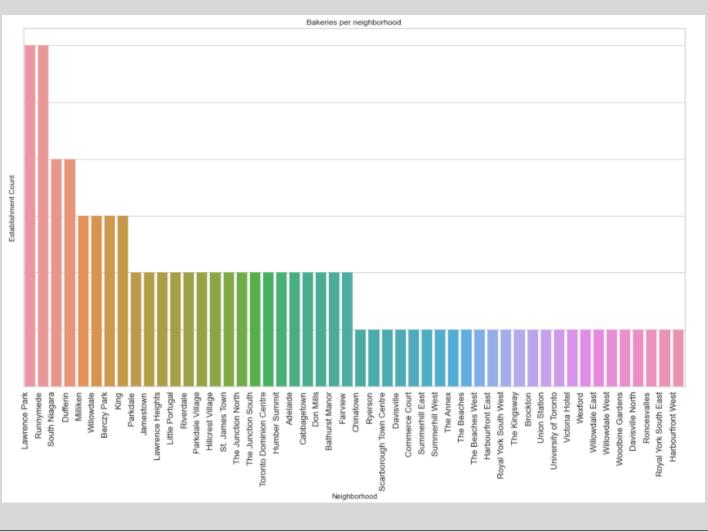
# Keep an eye on competition from Runnymede





Keep an eye on competition from Runnymede

Dense presence of coffee shops, cafes, bakeries in Runnymede



#### Recommendation and future directions

- Conducted an analysis through K-Means clustering to find a suitable location to open a pastry shop in Toronto:
  - Explore Cluster 3 neighborhoods, specifically: Oriole, Queen's Park, East Toronto, Mount Dennis, North Park, St Phillips, Martin Grove Gardens, Scarborough Village, Scarborough Village West, The Queensway East, Jamestown
  - Further validate the situation in the neighborhoods above
- Accuracy of the models has room for improvement. Consider augmenting with more data from other sources, such as:
  - Ratings
  - Richer list of establishments and locations
  - Foot traffic or population density