Business Problem

A contractor is trying to start their own business. This report is a recommendation for where to setup their Toronto office.

The primary domain of consulting that is undertaken by the contractor is \_\_\_\_\_\_\_. While this report would analyze his requirements specifically and try to conclude on an ordered list of suitable locations, it is by no means a limitation on the scope of this business problem and a domain-parametrised solution could be proposed going forward.

The requirements put forth by the contractor are as follows:

1. Identify a set of viable locations for setting up an office space which would be conducive to customer interfacing. The business area is beach-related goods/food/pets contracting.
2. The location should enable efficient distributorship of beach sports wear, seafood, aquarium animals, etc.

The identified venues in Toronto that would need to be spatially close to a potential office space are:

1. Athletics/Sports
2. Beach
3. Harbor/Marina
4. Fish Market
5. Boat/Ferry
6. Japanese/Korean/Taiwanese/Thai/Mediterranean/Vietnamese/Asian/Caribbean/Chinese/Filipino Restaurant
7. Fish & Chips Shop
8. Lake (?)
9. Aquarium
10. Pet Store
11. Seafood Restaurant
12. Scenic Lookout
13. Sporting Goods Shop
14. Supermarket
15. Sushi Restaurant
16. Swim School (?)

Usecase: Contracting lifeguards out to potential clients. Providing life guard training, equipment for water sports, swimming activities. Drawing tourists towards the water bodies, other aquatic tourist attractions.

Requirements include proximity to :

1. Swim School
2. Boat or Ferry
3. Sporting Goods Shop
4. Beach
5. Harbor / Marina
6. Lake
7. Scenic Lookout
8. Athletics & Sports

Steps:

1. Use the location data to find root mean squared (RMS) distance of a neighbourhood from each venue type.
2. Assign RMS distance from each venue type with a weightage w.
3. Divide w by the RMS distance to get the weighted proximity.
4. A neighbourhood has 8 features which are the weighted distances from each venue type.
5. Perform k-means clustering to get the neighbourhoods which are most viable for the office space.

Non-data science method:

1. Calculate the weighted proximity of a neighbourhood by summing weighted RMS distance for all venue types.
2. Score each neighbourhood in Toronto based on weighted proximity.
3. List the top 5 neighbourhoods based on highest score.