Reid Webber

Battle of the Neighborhoods

Boston

January 2020

Background: A family is facing a move to the Boston area. The husband's company is transferring him to the company's U.S. headquarters which is located northwest of Boston. The spouse found a job in downtown Boston working at the New England Aquarium as a marine biologist. They prefer living in a single home in the suburbs and not downtown Boston. Their children are grown, and they do not have to worry about schools in the area.

Problem: The move must happen quickly. The family has found a real estate agent who has been sending lots of emails on homes within 25 kilometers of Boston and sharing too much information for them to make a decision. The family has a three-day weekend to search for homes and they want to narrow their search to the best neighborhood in order to maximize the amount of time looking at homes.
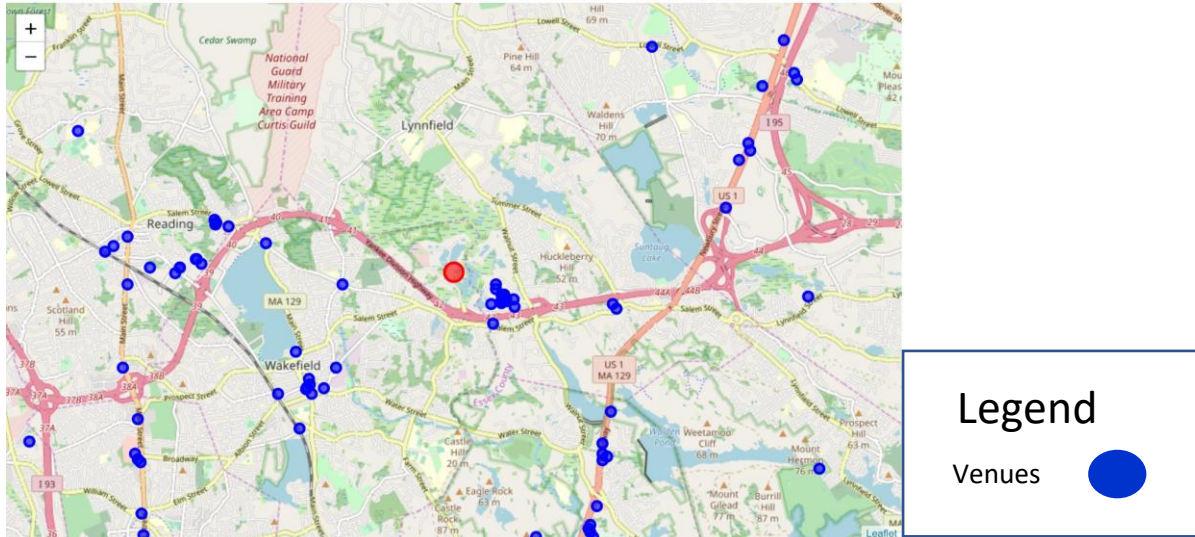
Data Acquisition: The family wants to use Foursquare.com data in order to determine the best location(s) to search in Boston. They will submit a number of questions based on their interests in order to determine the best location to search for homes.

Data Requirements: The family wants to compare neighborhoods in the area and has some specific requirements.
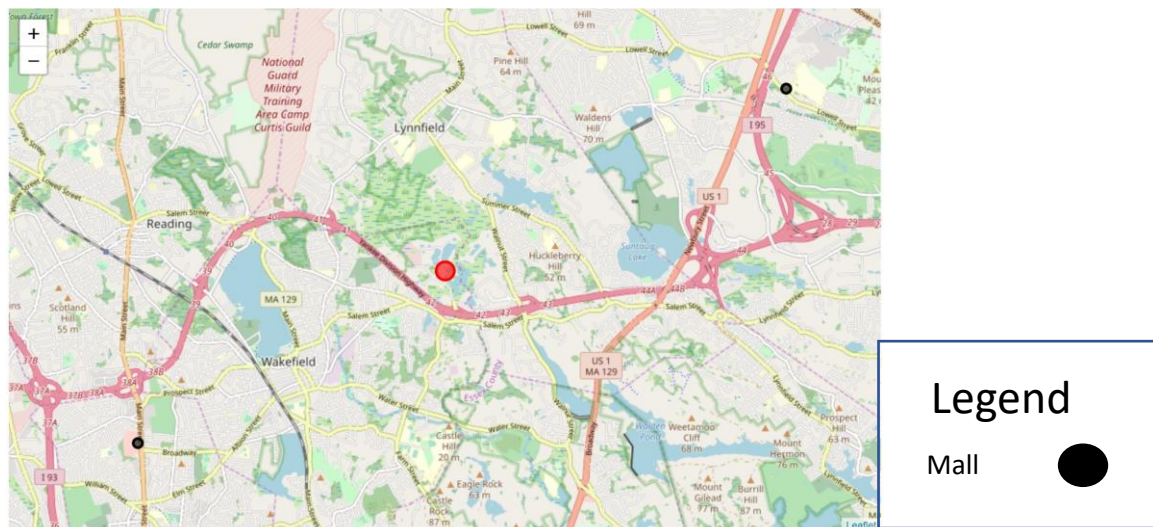
1. The office location is located at 201 Edgewater Drive, Wakefield, MA.
2. The husband wants a commute less than 5 km because he enjoys riding a bike to work on nice days and wants a short commute during inclement weather.
3. The wife wants to be within walking distance of a train or metro station for the commute to the aquarium.
4. They want to see the locations of venues in the area to understand where businesses are located compared to homes.
5. The wife would like to have a mall nearby.
6. The husband would like a gym in walking distance or on the route to the office.
7. They like to work on the house and yard so would like to be near a hardware store.
8. They would like to be near a hospital in the event of a medical emergency.

Findings: Foursquare.com data was used to plot the location of the new office location. A search was conducted for six criteria with a 10 km radius. The extended radius was selected to search Foursquare's full database and develop options that might be located between 5 km and 10 km.
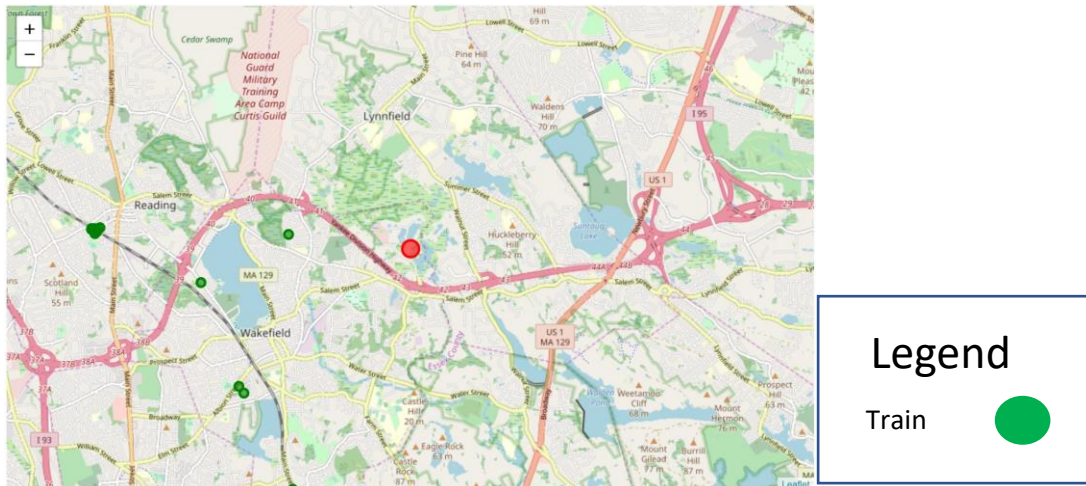
1. Venues search: A search of the area found 100 venues within the 10 km search radius.
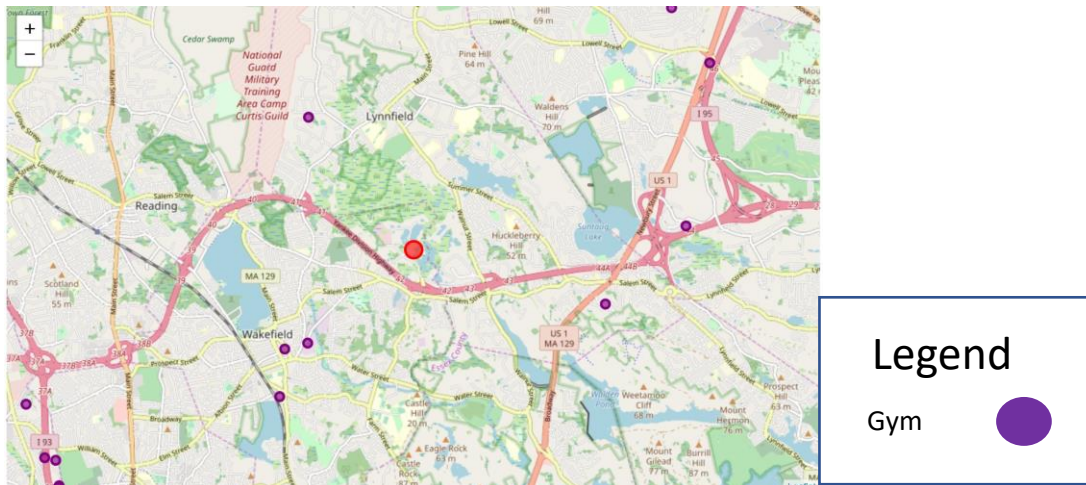
Legend

Venues ⬤

2. Malls search: A search of the area found seven (7) shopping malls within the 10 km search radius.
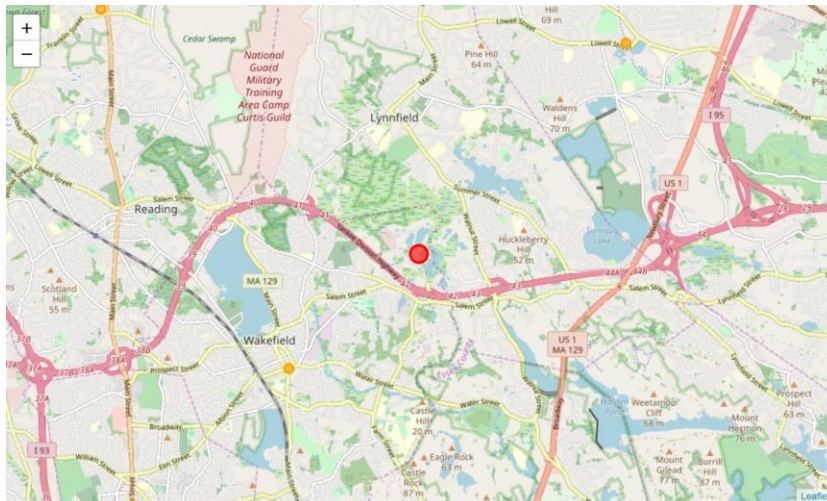

Legend

Mall ⬤

3. Train & Metro station search: A search of the area found 50 train and Metro stations within the 10 km search radius.

Legend

Train 🟢

4. Gym search: A search of the area found 50 gyms within the 10 km search radius.

Legend

Gym 🟣

5. Hardware store search: A search of the area found 22 hardware stores within the 10 km search radius.
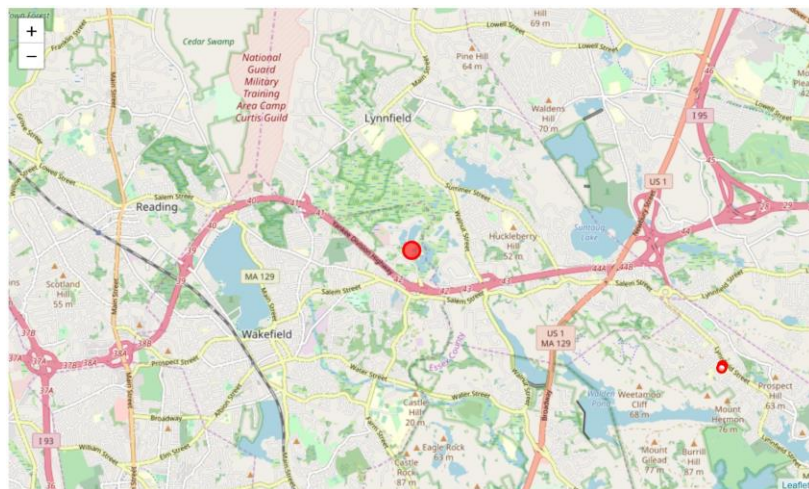
Legend

Hardware 🟠

6. Hospital search: A search of the area found 50 hospitals and emergency services within the 10 km search radius.
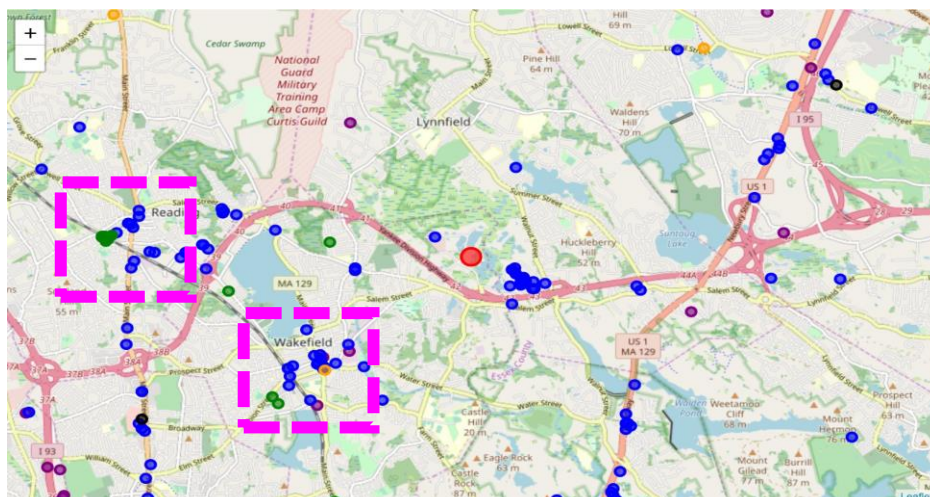

Legend

Hospital 🔴

Analysis: The overlay of data shows two locations that meet the family's criteria; Wakefield and Reading. The town of Wakefield is the first option because it has a selection of gyms and hardware stores while Reading does not. Both locations lack a mall and hospital, but the closest mall is approximately the same distance.

Legend

Venues 🔵

Mall ⚫

Gym 🔵

Train 🟢

Hardware 🟠

Hospital 🔴

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Summary: The recommendation for the family is to concentrate their search on Wakefield with a secondary option of Reading.

Github link

https://github.com/reidwebber/Coursera_Capstone/blob/master/The%20Battle%20of%20the%20Neighborhoods%20-%20Boston.ipynb

Nbviewer link

https://nbviewer.jupyter.org/github/reidwebber/Coursera_Capstone/blob/master/The%20Battle%20of%20the%20Neighborhoods%20-%20Boston.ipynb