



Capstone Project:

Where to start a business in Seattle, WA



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Contents

Introduction	2
Business Problem	2
Data.....	2
Methodology.....	4
Results.....	5
Discussion.....	18
Conclusion.....	18

Introduction

An important factor to consider for opening a new business in any place, is the information about the existing business in the surrounding area. Knowing how saturated or vacant a kind of business is, will help on a better decision about the place and kind of the new endeavor.

The use of location data to explore geographical locations allows us to analyze options for business in cities around the world.

This is possible by gathering information about existing business in specific area, so the details can be classified and counted according different criteria in order to assemble a solidly funded recommendation.

Business Problem

What location is recommended to open a business in Seattle, WA?

The location is an important factor in the success of a new business. So, in order to answer the question, it is required to provide a set of alternatives for opening a business in Seattle, WA.

The recommendations will include location and kind of pre-existing business in the surrounding area, so, it can be identified what business will successfully fit in that neighborhood.

Foursquare location data will be used as source of information about the market places in the different neighborhoods in the city.

This research should be interesting to investors looking for opportunities with a comprehensive argumentation and details about the different options, so their decisions will lead to successful results.

Data

The data to be used will be extracted, mainly, from Foursquare.com. This will provide quantitative and qualitative information of pre-existing business, in order to identify the cluster where a new business could fit.

However, to be able of requesting the information from Foursquare.com, it will be necessary to obtain the coordinates of the different zip codes in Seattle. This information will be extracted from <http://www.discoverseattle.net/zipcodes.php>, where the postal codes are listed along with their geographical coordinates.

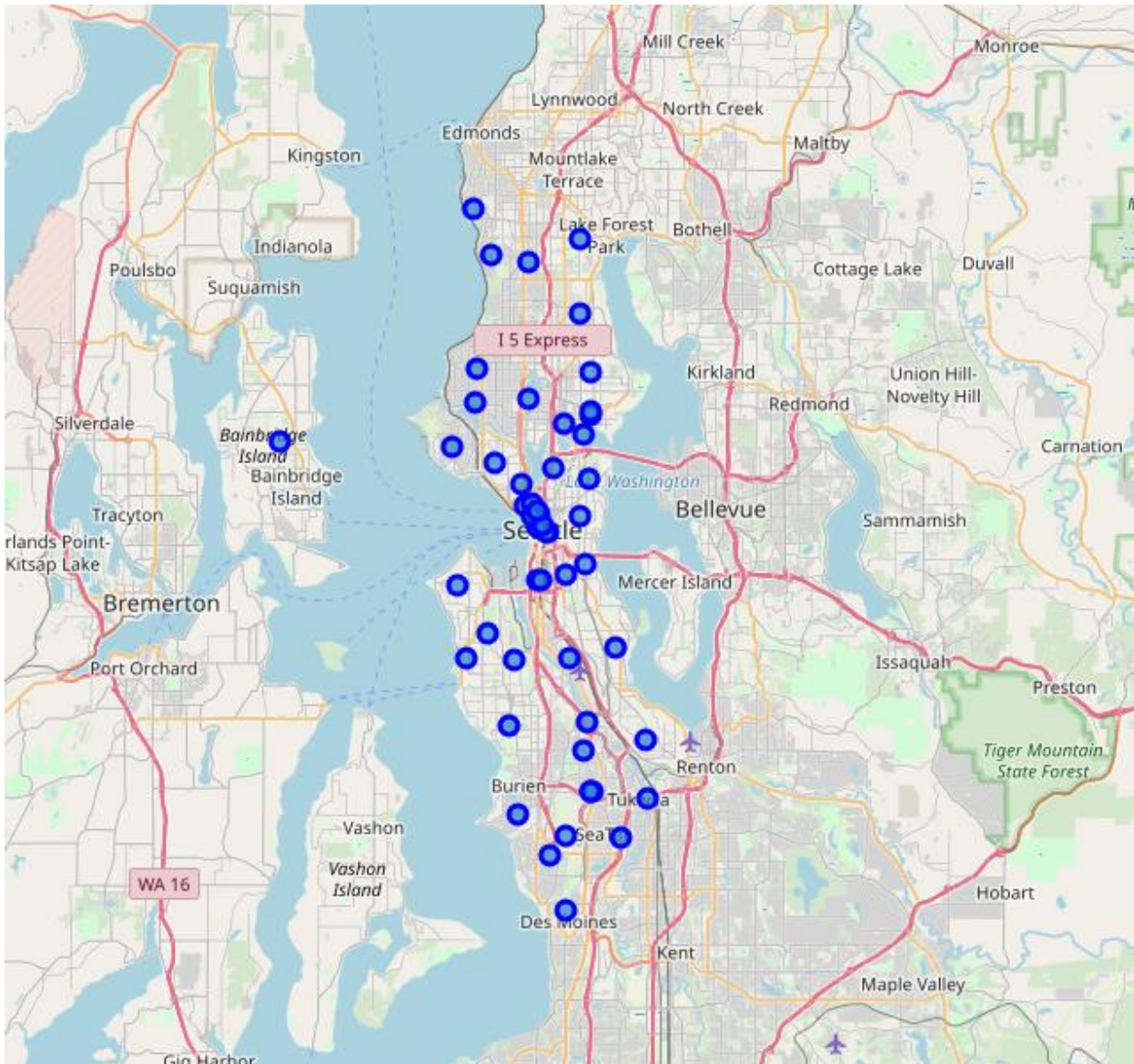
The queries to Foursquare will be focused on venues for different kind of business within the different postal codes that will be considered as reference to denote an area in Seattle.

The analysis will be handled in data frames similar to the following, from where maps will be generated to obtain visualizations that will help in identifying the existing business so, the more convenient new business and its location can be determined.

Zip code	category	latitude	longitude
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Zip code	Zip code Latitude	Zip code Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
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Yoga Studio	Afghan Restaurant	Airport	Airport Food Court	Airport Gate	Airport Lounge	Airport Service	Airport Terminal	American Restaurant
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Methodology

These are the steps towards finding the results:

- Data collection: Obtain the information from the specified sources. This is accomplished by scrapping out the postal codes and their coordinates from the web page where they are available and by querying the Foursquare site with the appropriated parameters, including latitude and longitude of each of the Seattle's postal codes.
- Data preparation: Select and format the data collected so it can be feed into the different library's functions like pandas, NumPy, etc. The intermediate and final results will also be accommodated to be analyzed, discussed and shown.

- Modeling: A descriptive model will be used to show the density of different pre-existing business in each zip code and to identify what kind of business has less presence or is missing in the area.
- Compiling and assembling results: Based on the different kind of business and their density in an area, a list with the most and least common kind of business will be provided for each zip code in Seattle, so the stakeholders will be able to decide what kind of business and where to open their new business.

Results

Following are the results for each zip code in Seattle.

The first table shows the list of the most common kind of business, the second table shows the list of the least common kind of business within each zip code.

	Zip code	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	98101	Hotel	Coffee Shop	Clothing Store	New American Restaurant	Italian Restaurant	Spa	Steakhouse	Juice Bar	Theater	Seafood Restaurant
1	98102	Gym	Italian Restaurant	Sporting Goods Shop	Trail	Spa	Bubble Tea Shop	Memorial Site	Food & Drink Shop	Boat or Ferry	Cemetery
2	98103	Park	Baseball Field	Dog Run	Theater	Harbor / Marina	Tennis Court	Golf Course	Electronics Store	Ethiopian Restaurant	Event Space
3	98104	Chinese Restaurant	Coffee Shop	Café	Japanese Restaurant	Tea Room	Sandwich Place	Scenic Lookout	Poke Place	Pizza Place	Bakery
4	98105	Furniture / Home Store	Electronics Store	Lingerie Store	Sporting Goods Shop	Women's Store	Clothing Store	Steakhouse	Chinese Restaurant	Jewelry Store	Donut Shop
5	98106	Convenience Store	Park	Theater	Trail	Café	Baseball Field	Coffee Shop	Burger Joint	Farmers Market	Falafel Restaurant
6	98107	Mexican Restaurant	Coffee Shop	Sushi Restaurant	Bar	Cocktail Bar	Ice Cream Shop	Burger Joint	Bakery	Vietnamese	Sandwich Place

	Zip code	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
										Restaurant	
7	98108	Airport Terminal	Airport	Café	Rental Car Location	Bus Station	Gym	Office	Electronics Store	Airport Service	Airport Lounge
8	98109	Coffee Shop	Hotel	Thai Restaurant	Gym / Fitness Center	Noodle House	Supermarket	Taiwanese Restaurant	Bar	Japanese Restaurant	Mediterranean Restaurant
9	98110	Tree	Yoga Studio	Drugstore	Fish Market	Fish & Chips Shop	Filipino Restaurant	Fast Food Restaurant	Farmers Market	Falafel Restaurant	Fabric Shop
10	98111	Hotel	Coffee Shop	Clothing Store	New American Restaurant	Theater	Gym	Spa	Café	American Restaurant	Steakhouse
11	98112	Garden	Café	Bakery	Optical Shop	Soccer Field	Sushi Restaurant	Scenic Lookout	Tea Room	Neighborhood	Gas Station
12	98114	Café	Mexican Restaurant	Yoga Studio	Italian Restaurant	Pub	Coffee Shop	Scenic Lookout	Mediterranean Restaurant	Taco Place	Light Rail Station
13	98115	Coffee Shop	Yoga Studio	Japanese Restaurant	Park	Sandwich Place	Dumpling Restaurant	Steakhouse	Supermarket	Lounge	Bank
14	98116	Scenic Lookout	Yoga Studio	Drugstore	Fish Market	Fish & Chips Shop	Filipino Restaurant	Fast Food Restaurant	Farmers Market	Falafel Restaurant	Fabric Shop
15	98117	Smoke Shop	Mexican Restaurant	Food Truck	Beer Bar	Thai Restaurant	Bus Stop	Shipping Store	Bakery	Mobile Phone Shop	Furniture / Home Store

	Zip code	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
16	98118	Food Truck	Convenience Store	Home Service	Fast Food Restaurant	Video Store	Salon / Barbershop	Greek Restaurant	Café	Event Space	Electronics Store
17	98119	Bakery	Playground	Grocery Store	Mexican Restaurant	Boutique	Café	Bistro	Coffee Shop	Dive Bar	Sandwich Place
18	98121	Bar	Coffee Shop	Bakery	Pizza Place	Hotel	Sushi Restaurant	Cocktail Bar	Breakfast Spot	New American Restaurant	Korean Restaurant
19	98122	Ethiopian Restaurant	Coffee Shop	Bar	Fried Chicken Joint	Deli / Bodega	Dessert Shop	Taco Place	Bookstore	Burger Joint	Café
20	98124	Food Truck	Coffee Shop	Marijuana Dispensary	Nightclub	Brewery	Taco Place	Diner	Record Shop	Rental Car Location	Donut Shop
21	98125	Hobby Shop	Greek Restaurant	Rental Car Location	Coffee Shop	Burger Joint	Taco Place	Thai Restaurant	Bar	Gas Station	Gastropub
22	98126	Park	Garden	Rental Car Location	Pizza Place	Vietnamese Restaurant	Food Truck	Yoga Studio	Dumpling Restaurant	Electronics Store	Ethiopian Restaurant
23	98129	Coffee Shop	Hotel	Italian Restaurant	Juice Bar	Bakery	Food Truck	Café	Steakhouse	Spa	Gym
24	98131	Fast Food Restaurant	Mexican Restaurant	Convenience Store	Train Station	Sushi Restaurant	Moving Target	Fried Chicken Joint	Breakfast Spot	Dessert Shop	Eye Doctor
25	98132	Fast Food Restaurant	Mexican Restaurant	Convenience Store	Train Station	Sushi Restaurant	Moving Target	Fried Chicken Joint	Breakfast Spot	Dessert Shop	Eye Doctor

	Zip code	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
26	98133	Vietnamese Restaurant	American Restaurant	Coffee Shop	Grocery Store	Korean Restaurant	Convenience Store	Fabric Shop	Sandwich Place	Bakery	Burger Joint
27	98134	Food Truck	Coffee Shop	Brewery	Nightclub	Marijuana Dispensary	Taco Place	Dive Bar	Diner	Record Shop	Rental Car Location
28	98136	Park	Coffee Shop	Pool	Taco Place	Pet Store	Food Truck	Gym	Eye Doctor	Dumpling Restaurant	Electronics Store
29	98138	Hotel	Trail	ATM	Shipping Store	Motel	Sandwich Place	Korean Restaurant	Intersection	Mexican Restaurant	Restaurant
30	98144	Mexican Restaurant	Bakery	Pharmacy	Convenience Store	Park	Dog Run	Sandwich Place	Café	Museum	Fast Food Restaurant
31	98145	Coffee Shop	Sandwich Place	Chinese Restaurant	Thai Restaurant	Korean Restaurant	Vietnamese Restaurant	Café	Bubble Tea Shop	Convenience Store	Thrift / Vintage Store
32	98146	Nature Preserve	Pizza Place	Convenience Store	Home Service	Vietnamese Restaurant	Fast Food Restaurant	Bakery	Taco Place	Café	Yoga Studio
33	98148	BBQ Joint	Deli / Bodega	Garden Center	Coffee Shop	Shipping Store	Convenience Store	Filipino Restaurant	Fast Food Restaurant	Farmers Market	Dumpling Restaurant
34	98151	Fast Food Restaurant	Mexican Restaurant	Convenience Store	Train Station	Sushi Restaurant	Moving Target	Fried Chicken Joint	Breakfast Spot	Dessert Shop	Eye Doctor
35	98154	Hotel	Coffee Shop	New American Restaurant	Italian Restaurant	American Restaurant	Sushi Restaurant	Seafood Restaurant	Gym	Café	Theater

	Zip code	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
36	98155	Coffee Shop	Construction & Landscaping	Department Store	Tailor Shop	Farmers Market	Ethiopian Restaurant	Event Space	Eye Doctor	Fabric Shop	Falafel Restaurant
37	98158	Other Repair Shop	History Museum	Fish Market	Fish & Chips Shop	Filipino Restaurant	Fast Food Restaurant	Farmers Market	Falafel Restaurant	Fabric Shop	Eye Doctor
38	98160	Food Service	American Restaurant	Athletics & Sports	Dive Bar	Music Venue	Gym / Fitness Center	Fast Food Restaurant	Playground	Farmers Market	Dumpling Restaurant
39	98161	Coffee Shop	Hotel	New American Restaurant	American Restaurant	Café	Concert Hall	Theater	Outdoor Supply Store	Cocktail Bar	Spa
40	98164	Hotel	Coffee Shop	Italian Restaurant	New American Restaurant	Café	Cocktail Bar	Sushi Restaurant	Pizza Place	Seafood Restaurant	Burger Joint
41	98166	Music Venue	Yoga Studio	History Museum	Fish Market	Fish & Chips Shop	Filipino Restaurant	Fast Food Restaurant	Farmers Market	Falafel Restaurant	Fabric Shop
42	98168	Construction & Landscaping	Mobile Phone Shop	Dumpling Restaurant	Flower Shop	Fish Market	Fish & Chips Shop	Filipino Restaurant	Fast Food Restaurant	Farmers Market	Falafel Restaurant
43	98170	Hotel	Coffee Shop	Café	Italian Restaurant	Sushi Restaurant	New American Restaurant	Concert Hall	Burger Joint	Seafood Restaurant	Scenic Lookout
44	98171	Chinese Restaurant	Café	Cocktail Bar	Japanese Restaurant	Coffee Shop	Bakery	Pizza Place	Scenic Lookout	Poke Place	Tea Room

	Zip code	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
45	98174	Hotel	Coffee Shop	Seafood Restaurant	New American Restaurant	Cocktail Bar	American Restaurant	Café	Donut Shop	Outdoor Supply Store	Thai Restaurant
46	98177	Construction & Landscaping	Outdoor Supply Store	Yoga Studio	Drugstore	Fish Market	Fish & Chips Shop	Filipino Restaurant	Fast Food Restaurant	Farmers Market	Falafel Restaurant
47	98178	Taco Place	Grocery Store	Gas Station	Yoga Studio	Drugstore	Fish & Chips Shop	Filipino Restaurant	Fast Food Restaurant	Farmers Market	Falafel Restaurant
48	98181	Coffee Shop	Hotel	Breakfast Spot	Clothing Store	Cocktail Bar	Italian Restaurant	French Restaurant	Bakery	Seafood Restaurant	Café
49	98184	Hotel	Coffee Shop	Café	Italian Restaurant	Pizza Place	Concert Hall	Theater	New American Restaurant	Seafood Restaurant	Hotel Bar
50	98185	Electronics Store	Furniture / Home Store	Coffee Shop	Martial Arts Dojo	Donut Shop	Mexican Restaurant	Brewery	Sporting Goods Shop	Supermarket	Lingerie Store
51	98188	Pet Store	Park	Baseball Field	Yoga Studio	Drugstore	Fish & Chips Shop	Filipino Restaurant	Fast Food Restaurant	Farmers Market	Falafel Restaurant
52	98190	River	Coffee Shop	Business Service	Park	Yoga Studio	Drugstore	Filipino Restaurant	Fast Food Restaurant	Farmers Market	Falafel Restaurant
53	98191	Coffee Shop	Hotel	Clothing Store	New American Restaurant	Gym	Steakhouse	Theater	Sandwich Place	Juice Bar	Dumpling Restaurant
54	98195	Clothing Store	Park	Beer Garden	Athletics & Sports	Trail	College Baseball Diamond	Gym	Café	Bus Station	Pool

	Zip code	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
55	98198	Pet Store	Park	Business Service	Baseball Field	Café	Yoga Studio	Electronics Store	Fish & Chips Shop	Filipino Restaurant	Fast Food Restaurant
56	98199	Chinese Restaurant	Video Store	Music Venue	Baseball Field	Tennis Court	Miscellaneous Shop	Pool	Construction & Landscaping	Deli / Bodega	Electronics Store

The second table is the actual list of suggested business to be open in each zip code, since those are more likely to have no competency and/or to fulfill a vacancy in the market for that specific area.

	Zip code	1st Least Common Venue	2nd Least Common Venue	3rd Least Common Venue	4th Least Common Venue	5th Least Common Venue	6th Least Common Venue	7th Least Common Venue	8th Least Common Venue	9th Least Common Venue	10th Least Common Venue
0	98101	ATM	Marijuana Dispensary	Market	Martial Arts Dojo	Memorial Site	Middle Eastern Restaurant	Mini Golf	Miscellaneous Shop	Mobile Phone Shop	Motel
1	98102	ATM	Miscellaneous Shop	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood
2	98103	ATM	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant	Nightclub
3	98104	ATM	Memorial Site	Mexican Restaurant	Middle Eastern Restaurant	Mini Golf	Miscellaneous Shop	Mobile Phone Shop	Motel	Movie Theater	Moving Target
4	98105	ATM	Mini Golf	Miscellaneous Shop	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood
5	98106	ATM	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American	Nightclub

	Zip code	1st Least Common Venue	2nd Least Common Venue	3rd Least Common Venue	4th Least Common Venue	5th Least Common Venue	6th Least Common Venue	7th Least Common Venue	8th Least Common Venue	9th Least Common Venue	10th Least Common Venue
										n Restaura nt	
6	981 07	ATM	Historic Site	History Museum	Women's Store	Home Service	Hot Dog Joint	Sporting Goods Shop	Hotel Bar	Speakeas y	Spanish Restaura nt
7	981 08	ATM	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b
8	981 09	Hobb y Shop	Memoria l Site	Middle Eastern Restaura nt	Mini Golf	Miscella neous Shop	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Museum
9	981 10	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b	Noodle House
10	981 11	ATM	Market	Martial Arts Dojo	Mediterr anean Restaura nt	Memoria l Site	Mini Golf	Miscella neous Shop	Mobile Phone Shop	Motel	Movie Theater
11	981 12	ATM	Mini Golf	Miscella neous Shop	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve
12	981 14	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b	Noodle House
13	981 15	ATM	Miscella neous Shop	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood
14	981 16	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America	Nightclu b	Noodle House

	Zip code	1st Least Common Venue	2nd Least Common Venue	3rd Least Common Venue	4th Least Common Venue	5th Least Common Venue	6th Least Common Venue	7th Least Common Venue	8th Least Common Venue	9th Least Common Venue	10th Least Common Venue
									n Restaura nt		
15	98117	ATM	Memoria l Site	Mini Golf	Miscella neous Shop	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve
16	98118	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b	Noodle House
17	98119	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b	Noodle House
18	98121	ATM	Market	Martial Arts Dojo	Memoria l Site	Mini Golf	Miscella neous Shop	Mobile Phone Shop	Motel	Moving Target	Museum
19	98122	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b	Noodle House
20	98124	ATM	Middle Eastern Restaura nt	Mini Golf	Miscella neous Shop	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Museum	Music Venue
21	98125	ATM	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b
22	98126	ATM	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n

	Zip code	1st Least Common Venue	2nd Least Common Venue	3rd Least Common Venue	4th Least Common Venue	5th Least Common Venue	6th Least Common Venue	7th Least Common Venue	8th Least Common Venue	9th Least Common Venue	10th Least Common Venue
											Restaura nt
23	98129	ATM	Martial Arts Dojo	Memorial Site	Mini Golf	Miscellaneous Shop	Mobile Phone Shop	Motel	Moving Target	Museum	Music Venue
24	98131	ATM	Motel	Movie Theater	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant	Nightclub	Noodle House
25	98132	ATM	Motel	Movie Theater	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant	Nightclub	Noodle House
26	98133	ATM	Mobile Phone Shop	Motel	Movie Theater	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant	Nightclub
27	98134	ATM	Middle Eastern Restaurant	Mini Golf	Miscellaneous Shop	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Museum	Music Venue
28	98136	ATM	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant
29	98138	Hobby Shop	Miscellaneous Shop	Mobile Phone Shop	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant
30	98144	ATM	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Music Venue	Nature Preserve	Neighborhood	New American	Nightclub

	Zip code	1st Least Com mon Venu e	2nd Least Commo n Venue	3rd Least Commo n Venue	4th Least Commo n Venue	5th Least Commo n Venue	6th Least Commo n Venue	7th Least Commo n Venue	8th Least Commo n Venue	9th Least Commo n Venue	10th Least Commo n Venue
										Restaura nt	
3 1	981 45	Hobb y Shop	Women's Store	Home Service	Hot Dog Joint	Steakhou se	Hotel Bar	Stationer y Store	Sports Bar	Indie Movie Theater	Intersecti on
3 2	981 46	ATM	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Museum	Music Venue	Neighbor hood	New America n Restaura nt	Nightclu b
3 3	981 48	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b	Noodle House
3 4	981 51	ATM	Motel	Movie Theater	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b	Noodle House
3 5	981 54	ATM	Light Rail Station	Lingerie Store	Liquor Store	Marijuan a Dispensa ry	Market	Martial Arts Dojo	Memoria l Site	Mexican Restaura nt	Middle Eastern Restaura nt
3 6	981 55	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b	Noodle House
3 7	981 58	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighbor hood	New America n Restaura nt	Nightclu b	Noodle House
3 8	981 60	ATM	Motel	Movie Theater	Moving Target	Museum	Nature Preserve	Neighbor hood	New America n	Nightclu b	Noodle House

	Zip code	1st Least Common Venue	2nd Least Common Venue	3rd Least Common Venue	4th Least Common Venue	5th Least Common Venue	6th Least Common Venue	7th Least Common Venue	8th Least Common Venue	9th Least Common Venue	10th Least Common Venue
									Restaurant		
39	98161	ATM	Latin American Restaurant	Light Rail Station	Lingerie Store	Liquor Store	Marijuana Dispensary	Market	Martial Arts Dojo	Memorial Site	Middle Eastern Restaurant
40	98164	ATM	Lingerie Store	Liquor Store	Marijuana Dispensary	Market	Martial Arts Dojo	Memorial Site	Middle Eastern Restaurant	Mini Golf	Miscellaneous Shop
41	98166	ATM	Movie Theater	Moving Target	Museum	Nature Preserve	Neighborhood	New American Restaurant	Nightclub	Noodle House	Office
42	98168	ATM	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant	Nightclub	Noodle House	Office
43	98170	ATM	Market	Martial Arts Dojo	Mediterranean Restaurant	Memorial Site	Mexican Restaurant	Middle Eastern Restaurant	Mini Golf	Miscellaneous Shop	Mobile Phone Shop
44	98171	ATM	Martial Arts Dojo	Mediterranean Restaurant	Memorial Site	Middle Eastern Restaurant	Mini Golf	Miscellaneous Shop	Mobile Phone Shop	Motel	Movie Theater
45	98174	ATM	Latin American Restaurant	Light Rail Station	Lingerie Store	Liquor Store	Lounge	Marijuana Dispensary	Market	Martial Arts Dojo	Memorial Site
46	98177	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American	Nightclub	Noodle House

	Zip code	1st Least Common Venue	2nd Least Common Venue	3rd Least Common Venue	4th Least Common Venue	5th Least Common Venue	6th Least Common Venue	7th Least Common Venue	8th Least Common Venue	9th Least Common Venue	10th Least Common Venue
									Restaurant		
47	98178	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant	Nightclub	Noodle House
48	98181	ATM	Steakhouse	Historic Site	History Museum	Home Service	Sporting Goods Shop	Hotel Bar	Indian Restaurant	Indie Movie Theater	Hawaiian Restaurant
49	98184	Hobby Shop	Mediterranean Restaurant	Memorial Site	Mexican Restaurant	Middle Eastern Restaurant	Mini Golf	Miscellaneous Shop	Mobile Phone Shop	Motel	Movie Theater
50	98185	ATM	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant	Nightclub	Noodle House
51	98188	ATM	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant	Nightclub
52	98190	ATM	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant	Nightclub
53	98191	ATM	Mediterranean Restaurant	Memorial Site	Mexican Restaurant	Mini Golf	Miscellaneous Shop	Mobile Phone Shop	Motel	Movie Theater	Moving Target
54	98195	ATM	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American	Nightclub

	Zip code	1st Least Common Venue	2nd Least Common Venue	3rd Least Common Venue	4th Least Common Venue	5th Least Common Venue	6th Least Common Venue	7th Least Common Venue	8th Least Common Venue	9th Least Common Venue	10th Least Common Venue
										Restaurant	
55	98198	ATM	Motel	Movie Theater	Moving Target	Museum	Music Venue	Nature Preserve	Neighborhood	New American Restaurant	Nightclub
56	98199	ATM	Mobile Phone Shop	Motel	Movie Theater	Moving Target	Museum	Nature Preserve	Neighborhood	New American Restaurant	Nightclub

Discussion

As it can be seen in the results, there are many kinds of business that are missing at all from all of the zip codes in Seattle. It would be required to make an exhaustive research to find out what could be the reasons for that kind of business to be missing and what are the chances in that zip code for that business to succeed.

Conclusion

The location is an important factor in the success of a new business. This project has suggested the kind and location for new business to start in Seattle, WA zip codes by using the valuable location data provided by Foursquare site.