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CSCI_2040 Project: Food Map of Hong Kong

November 30th 2017

Section 3.6 – Testing Food Search Engine

3.6.1

The result was a list of 22 restaurants whose names are below: A list of each restaurant object in its totality can be found in the Appendix. This result was obtained by calling *newSearch.filter({'cuisine': ['Japanese'], 'district': ['Sha Tin'], 'price-range': '$50-200'})* and then *newSearch.print_query_result()*. I have edited the result to only include the title for simplicity.

Waki Shokudo	Mi-Ne Sushi
Genki Sushi	Butao Ramen
Sushi Hiro Kitchen	Igarashi Japanese restaurant
Iki Teppanyaki Bento	Pepper Lunch Express
Aji Bou Izakaya	Yoshinoya
Yoshinoya	Wagyu More
Sushi Tokumi	Genki Sushi
Yayoi Japanese Dining Room	Daimon Shokudon
Ramen Dou	Mellow Brown Coffee by UCC
Ajisen Ramen	Kyoto Japanese restaurant
Ca-Tu-Ya	Nichigyu Shabu Shabu & Sukiyaki Restaurant

3.6.2

The result is displayed below. 22 items. First the restaurant name, then the rating, then the ratio. A list of each restaurant object in its totality can be found in the Appendix. This result was obtained by calling *newSearch.rank([1,0,0,0.9])* and then *newSearch.print_query_result()*. It would be cool to obtain user input on which restaurants the user likes, and allow the program to dynamically update the weighting vector so that it essentially 'learns' what tastes the user has over time. It may be also worthwhile to weight the *ratio_of_bad_reviews* based on the total number of reviews. A restaurant might have only 2 reviews, and the ratio then would be very little help.

> *Example:*
> > *Restaurant → Pepper Lunch Express*
> > *Rating → 4.5*
> > *Ratio → 0.0*

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Pepper Lunch Express
4.5
0.0

Sushi Tokumi
4
0.027027027027

Waki Shokudo
4
0.0

Aji Bou Izakaya
3.5
0.284090909091

Mi-ne Sushi
3.5
0.19801980198

Nichigyu Shabu Shabu &
Sukiyaki Restaurant
3.5
0.138888888889

Wagyu More
3.5
0.133333333333

Yayoi Japanese Dining Room
3.5
0.132075471698

Butao Ramen
3.5
0.131578947368

Kyoto Japanese Restaurant
3.5
0.125

Ca-Tu-Ya
3.5
0.111111111111

Yoshinoya
3.5
0.0571428571429

Yoshinoya
3.5
0.04

Genki sushi
3.5
0.025

Ajisen ramen
3.5
0.0

Genki sushi
3.5
0.0

Iki Teppanyaki bento
3
0.34328358209

Sushi Hiro kitchen
3
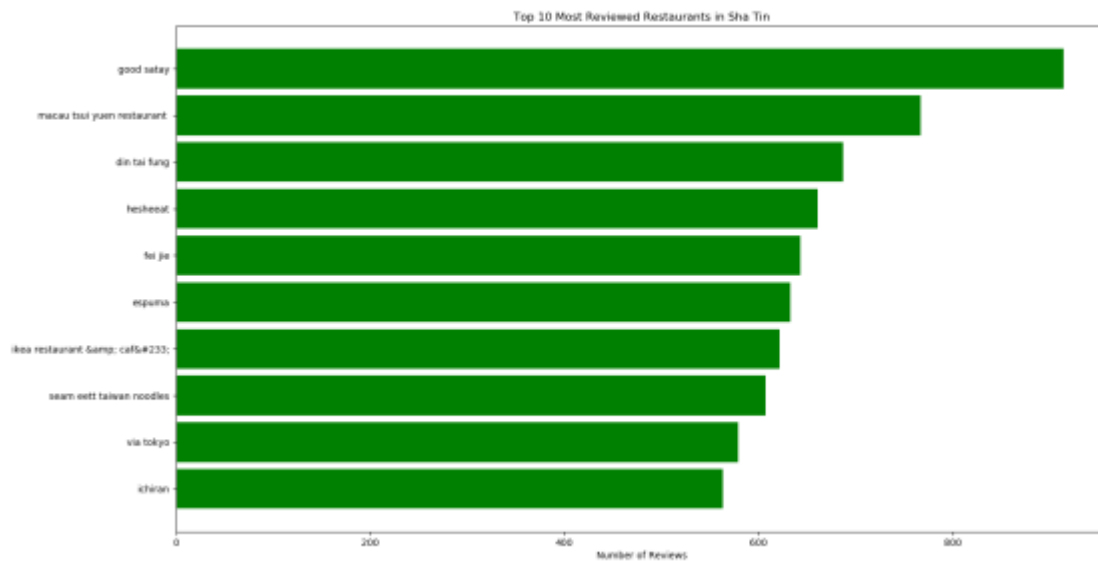0.333333333333

Daimon Shokudon
3
0.318181818182

Ramen Dou
3
0.222222222222

Igarashi Japanese Restaurant
3
0.0

Mellow Brown Coffee by UCC
2.5
0.51111111111

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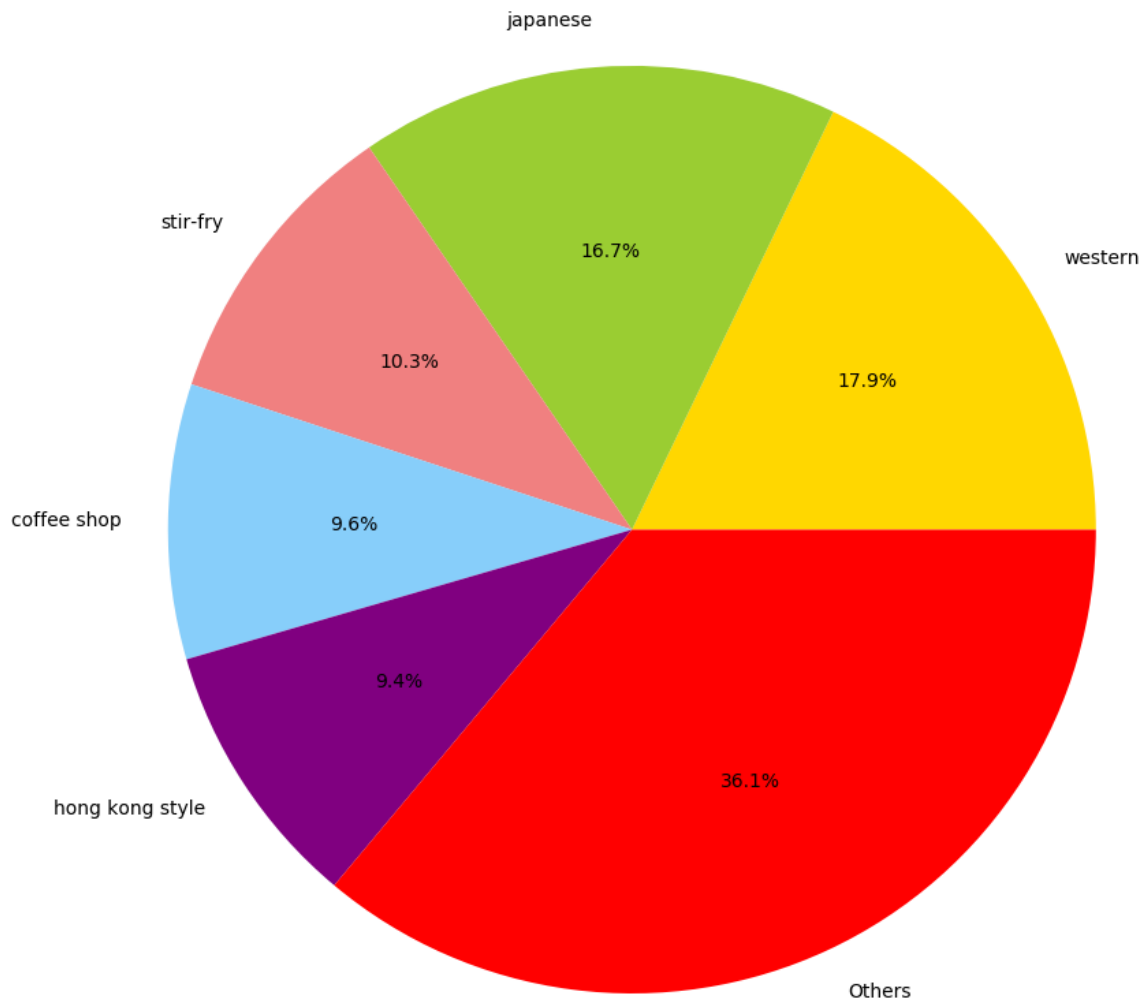Zachary Oelsner – 1155107201

Section 4.1 – Top-10 Reviewed Restaurants in Sha Tin

From this plot, we see that 'good satay' is doing extremely well in collecting customer reviews, with a significant lead over the next runner-up. Additionally, it was surprising to see Din Tai Fung do so well considering dim-sum is from Hong Kong and has to compete with numerous local dim-sum restaurants.

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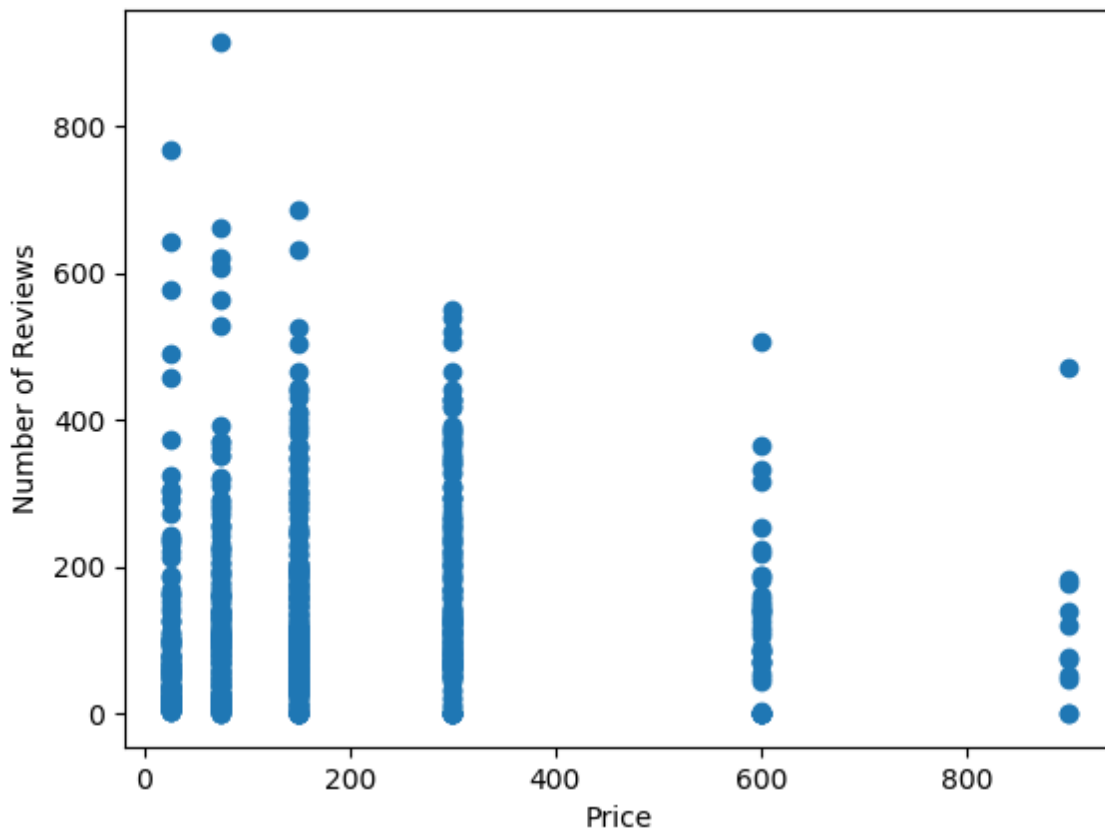Zachary Oelsner – 1155107201

Section 4.2 – The Distribution of Cuisine Types in Mong Kok

This is the plot showing the distribution of the Top-10 cuisine types in Mong Kok. From this chart, we can see that it's a really diverse area in terms of food. In contrast with Sha Tin, we see that Mong Kok includes a lot of 'Stir Fry' cuisines that are not as common in Sha Tin. Sha Tin, on the other hand was unique for its Guangdong food. Perhaps this is telling of the ethnic makeup of the two regions.

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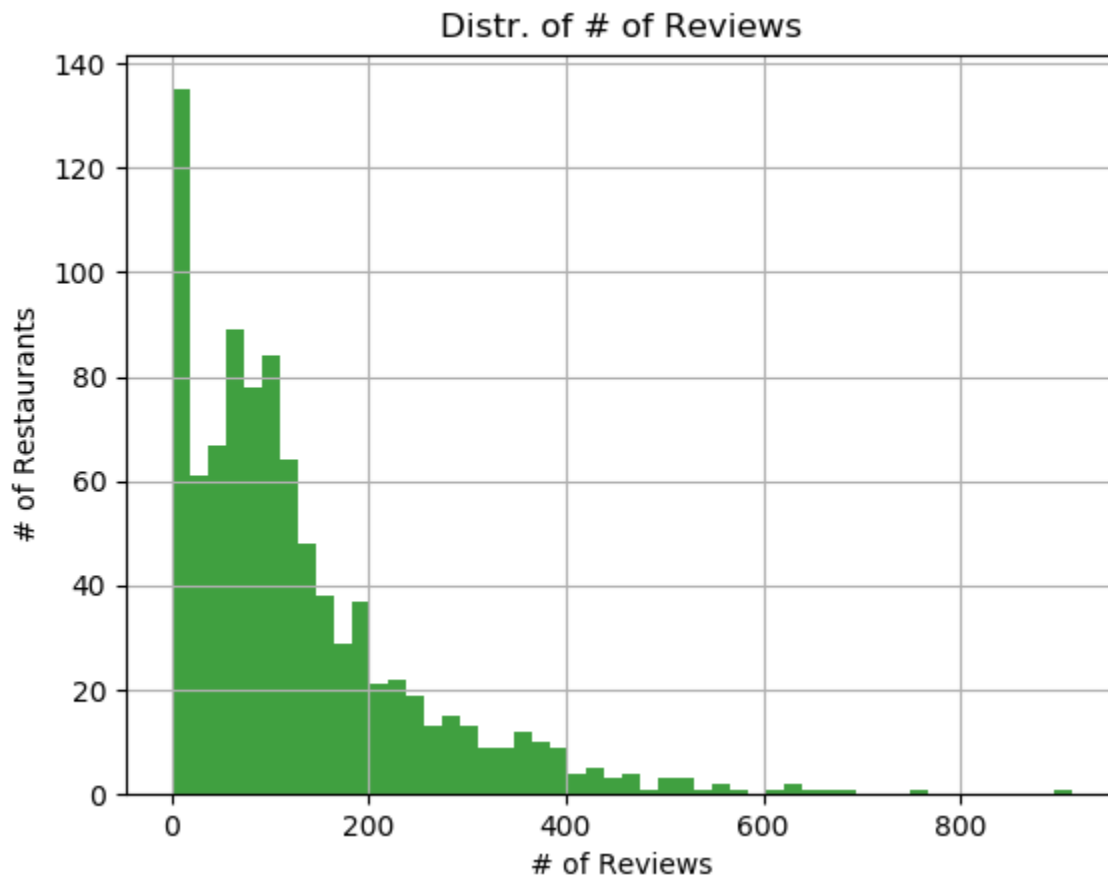Zachary Oelsner – 1155107201

Section 4.3 – Relationship Between Price and Popularity in HK

From this graph, we can see that the most popular restaurants are on the lower end of the price spectrum, which isn't surprising since people can't afford to eat at an expensive restaurant every day. I wonder if we had more fine data if we could see more interesting trends!

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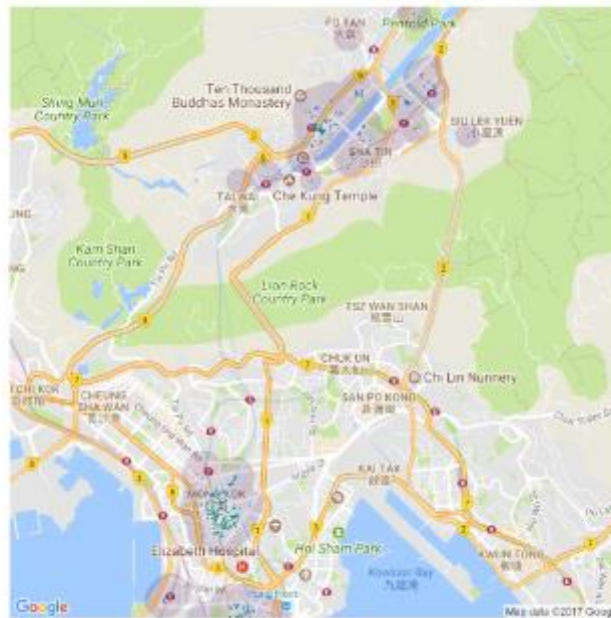Zachary Oelsner – 1155107201

Section 4.4 – Distribution of Number of Reviews in Tsim Sha Tsui

From this graph, we can see that the most common scenario to be in is to have zero reviews. If you do have reviews, it looks like most restaurants have between 50 and 150 reviews. After 150, the number of reviews quickly tapers off asymptotically. This steep curve represents the difficulty of obtaining a large portion of reviews. This distribution graph is right-skewed because having zero reviews is the default state.

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Section 5.1 – Google Maps API

From the heat mapping you can tell which areas of Hong Kong and densely populated with Japanese restaurants. Mong Kok and Sha Tin as you can see by the darker area are largely populated with Japanese restaurants.

Appendix

Section 3.6

(Full Result of 22 items)
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3.6.2

(Full list of 22 results)
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{u'cuisine': [u'japanese', u'hot pot', u'buffet'], u'name': u'nichigyu shabu shabu & sukiyak
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{u'cuisine': [u'japanese', u'sushi/sashimi', u'sushi bar'], u'name': u'genki sushi', u'district': u'sha tin', u'rating': u'3.5', u'url': u'https://www.openrice.com//en/hongkong/r-genki-sushi-sha-tin-japanese-sushi-sashimi-r38095', u'reviews': [u'18', u'21', u'1'], 'score': 3.5225, u'address': [22.3859357180841, 114.203996658325], u'price_range': u'$101-200'}

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{u'cuisine': [u'japanese', u'ramen'], u'name': u'daimon shokudon', u'district': u'sha tin', u'rating': u'3', u'url': u'https://www.openrice.com//en/hongkong/r-daimon-shokudon-sha-tin-japanese-ramen-r483190', u'reviews': [u'7', u'8', u'7'], 'score': 3.286363636363636, u'address': [22.3876337334994, 114.195102453232], u'price_range': u'$51-100'}

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{u'cuisine': [u'japanese', u'ramen', u'curry', u'sushi/sashimi'], u'name': u'igarashi japanese restaurant', u'district': u'sha tin', u'rating': u'3', u'url': u'https://www.openrice.com//en/hongkong/r-igarashi-japanese-restaurant-sha-tin-japanese-curry-r193089', u'reviews': [u'1', u'4', u'0'], 'score': 3.0, u'address': [22.3754693498579, 114.193332195282], u'price_range': u'$51-100'}

{u'cuisine': [u'japanese', u'coffee shop', u'yoshoku'], u'name': u'mellow brown coffee by ucc', u'district': u'sha tin', u'rating': u'2.5', u'url': u'https://www.openrice.com//en/hongkong/r-mellow-brown-coffee-by-ucc-sha-tin-japanese-r496091', u'reviews': [u'14', u'8', u'23'], 'score': 2.96, u'address': [22.381825343915, 114.188343286514], u'price_range': u'$101-200'}