Best Restaurant near UC Hastings College of the Law

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1. Introduction

When we move into a new environment, we often would like to familiarise ourselves with the surroundings and check out places of interests. Among the places of interests, the food options are important to many.

This project focuses on finding out the best restaurant in the vicinity of the campus in the proximity of UC Davis, San Francisco Campus using Foursquare data. The San Francisco Campus is where the MSBA classes of UC Davis are held, which shares the location with UC Hastings College of the Law, and the location is described as the latter in the project.

The UC Hastings College of the Law is located at a fantastic location in the vicinity of the Civic Centre, which is near the centre of the city and should be a lot of restaurants nearby. With numerous options available, it should be of interests to the students to know which restaurants are best rated within the vicinity of the campus. Thus, the objective is to make recommendations to the prospective students' popular places where they could dine at, and this report will be targeted at prospective or current MSBA students of UC Davis, who might be new to the location and wanting to find good (or palatable) food nearby.

Particularly, I am interested in this project as I will be studying in that campus, assuming everything goes according to plan. I am interested to know what food options are available to me when I grab some food in between classes.

2. Data Description

Based on the definition of our problem, the analysis will be based on the following two criteria:

- High ratings
- Within proximity to the UC Hastings College of the Law

As for how 'good' a restaurant is varied and largely subjective, with many factors in consideration, such as quality and speed of service, quality of food, cleanliness, consistency etc. For the standardisation of analysis, a rating above 8.0 would be deemed as 'good'.

The analysis will be broken down into two sections. The first section will analyse the restaurants that are within 300 metres to the campus, as proximity is an important factor. If no restaurant meets the condition established above, the distance will be increased to 1000 metres, this is the second section of the analysis. In each of the section, a deeper look at the reviews will be conducted to delve deeper into why they are highly rated when the list of restaurants is populated.

The following information will be extracted from external sources:

- The latitude and longitude of UC Hastings College of the Law will be extracted using geocoding web services offered by geopy
- The restaurants' data and location will be extracted using Foursquare API

3. Methodology

Methodology Overview

As this project focuses on finding out where are the decent restaurant in the vicinity of the campus, the analysis is limited to a spherical area of fewer than 1000 metres around UC Hastings College of the Law, based on the assumption that the restaurant should be reachable via foot, without resorting to other means of transport.

Since we are travelling on foot, it is more desirable if the restaurant is nearer. Hence, the first step of analysis seeks to find out what are the restaurants that are within 300 metres from the UC Hastings College of the Law. This dining option would be desirable for students with insufficient time to travel far in-between classes, making grabbing food from a faraway place infeasible. From the query result, I would like to know if there are restaurant options that can return a rating of above 8.0. If there is an option, I will delve deeper into that option.
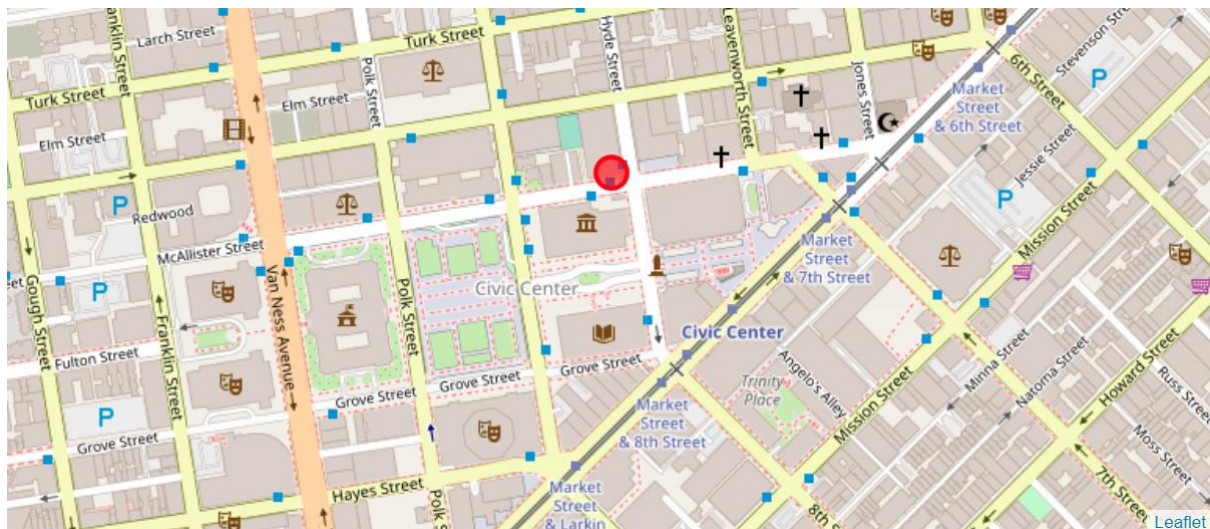
The second step will proceed on to query for restaurants within 1000 metre radius. Optimally, it is anticipated to have several restaurants having a rating above 8.0, as the UC Hastings College of the Law is located at the Civic Centre. Nonetheless, if my hypothesis were to prove false, I will look deeper at what led to its occurrence.

Data Sources

In carrying out the project, the latitude and longitude of UC Hastings College of the Law were extracted using geocoding web services offered by geopy, and the geographical locations of other food options are extracted from Foursquare using a limited Foursquare Personal account, connected via Foursquare API.

Pre-processing

To set up the data for analysis, the Foursquare credentials, as well as the geographical location of the UC Hastings College of the Law, are saved as variables.

It can be seen that the UC Hastings College of the Law is located in a bustling area, many food options should be available.
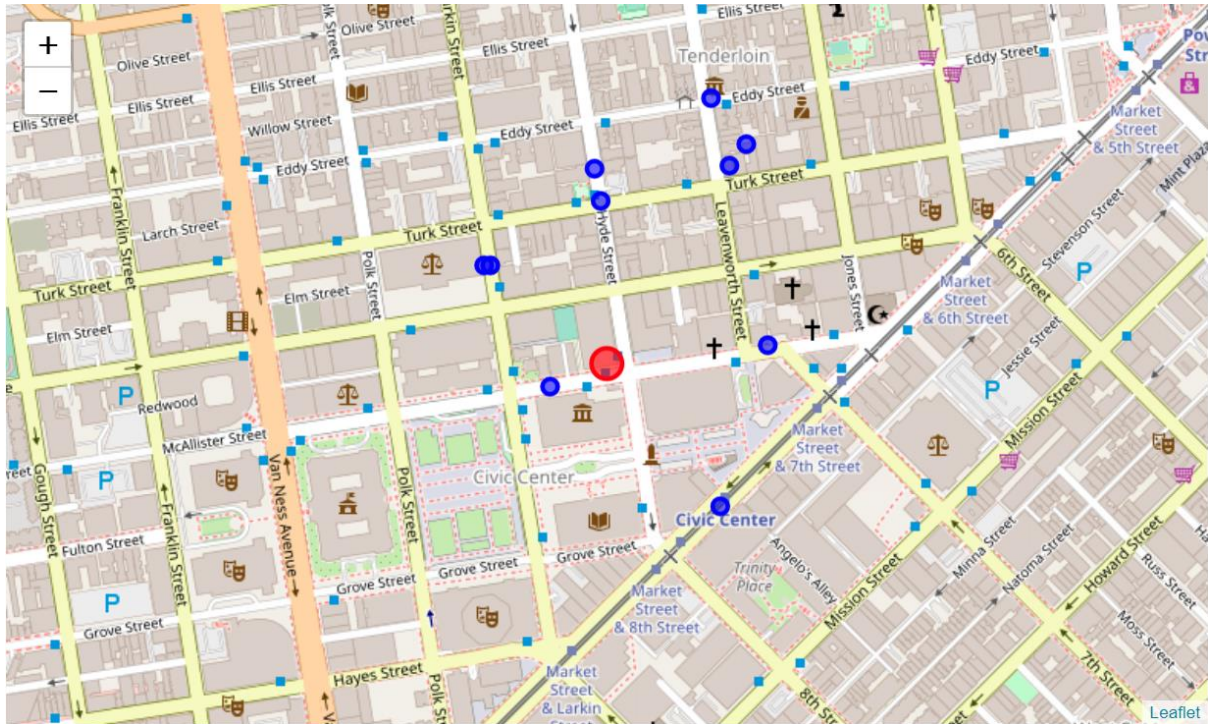
4. Analysis

The first part of the analysis focuses on food options within 300 metres.

The first step was to perform a search query using the foursquare API, with 'Restaurant' as the query, to locate the 'restaurant' options within 300 metres. The query returned 10 restaurants, which was converted into a pandas data frame.

	name	categories	address	crossStreet	lat	lng	labeledLatLngs	distance	postalCode	cc	
2	Civic Restaurant and Bar	Food	272 McAllister St	NaN	37.780578	-122.416420	[{'label': 'display', 'lat': 37.780578, 'lng':...	74	94102	US	Fran
4	Pink Flamingo Restaurant	Food	448 Larkin St	NaN	37.781922	-122.417266	[{'label': 'display', 'lat': 37.781922, 'lng':...	187	94102	US	Fran
3	Golden Kim Tar Restaurant	Chinese Restaurant	434 Larkin St	btwn Turk St & Golden Gate Ave	37.781925	-122.417351	[{'label': 'display', 'lat': 37.78192531938754...	193	94102	US	Fran
9	Comida Yucatan	Mexican Restaurant	294 Turk St	Leavenworth	37.782634	-122.415709	[{'label': 'display', 'lat': 37.7826336173429,...	199	NaN	US	Fran
1	Restaurant Caliente	Food	86 McAllister St	NaN	37.781052	-122.413371	[{'label': 'display', 'lat': 37.781052, 'lng':...	200	94102	US	Fran
5	Moon Star Restaurant	Food	1169 Market St	NaN	37.779255	-122.414055	[{'label': 'display', 'lat': 37.779255, 'lng':...	224	94103	US	Fran
6	Hai's Restaurant	Chinese Restaurant	227 Hyde St	btwn Eddy & Turk	37.783001	-122.415808	[{'label': 'display', 'lat': 37.78300106225665...	241	94102	US	Fran
7	Cam Hung Chinese Restaurant	Food	294 Turk St	NaN	37.783033	-122.413924	[{'label': 'display', 'lat': 37.783033, 'lng':...	287	94102	US	Fran
0	Quintero's Restaurant	Mexican Restaurant	393 Eddy St	btwn Leavenworth St & Wagner Aly	37.783265	-122.413685	[{'label': 'display', 'lat': 37.78326532583694...	320	94102	US	Fran
8	New Star Restaurant	Chinese Restaurant	168 Eddy	NaN	37.783776	-122.414171	[{'label': 'display', 'lat': 37.78377635760456...	351	94102	US	Fran

The restaurants can be visualised as such:

```
This venue has not been rated yet.
This venue has not been rated yet.
This venue has not been rated yet.
7.4
This venue has not been rated yet.
This venue has not been rated yet.
This venue has not been rated yet.
This venue has not been rated yet.
This venue has not been rated yet.
This venue has not been rated yet.
```

However, only one restaurant that was rated, which is the Golden Kim Tar Restaurant. A deeper dive into the data was carried out, where another query was made using the restaurant's ID to get the tips reviewed by the users.

19 reviews were returned from the search, but due to the account restriction, only one comment can be seen. But that seems like a great place for the students, especially if they are interested in great value options and fast service.

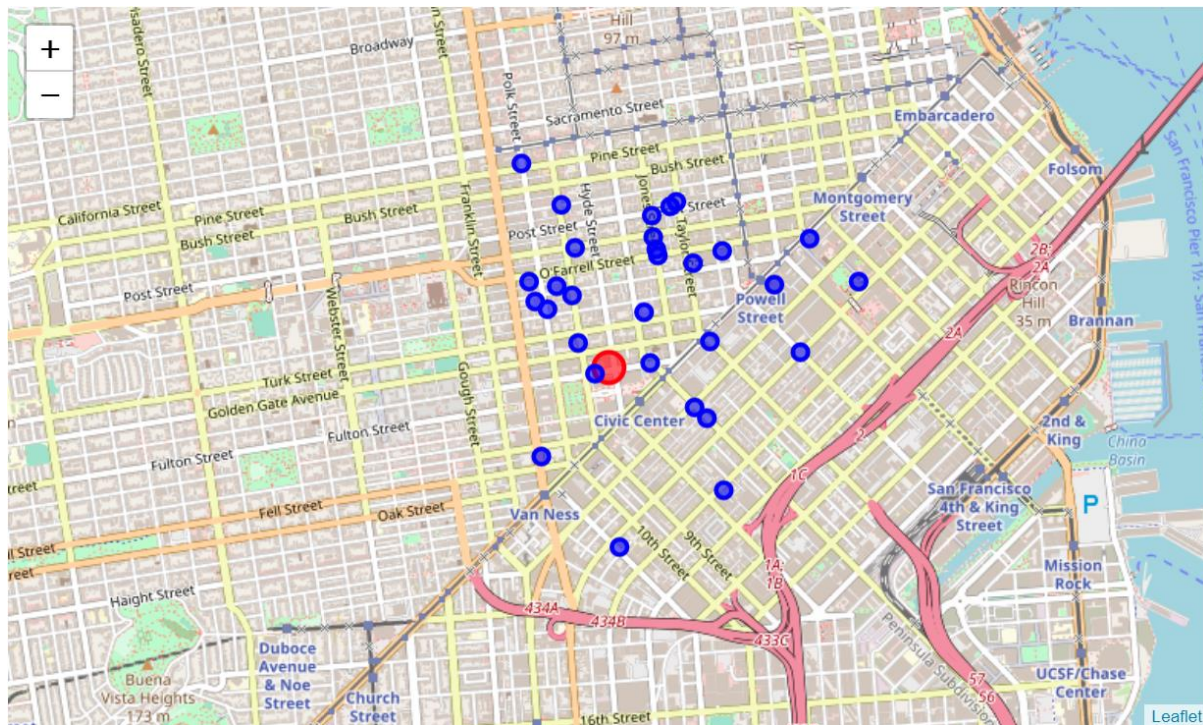|	text	agreeCount	disagreeCount	id	user.firstName	user.lastName	user.id
0	Coworkers brought me here. Great value, big portions, VERY ,fast service. Ordered the broccoli beef, my coworkers swear by the salt & pepper chicken wings..... Will try that next.	1	0	51fd7d91498ea69707a837d0	Kay	V	2558780

The second part of the analysis focus on restaurants within 1000 metres

In the second part, we repeat what we have done previously by changing some parameters.

These are some of the food options within 1000 metres:

	name	categories	address	crossStreet	lat	lng	labeledLatLngs	distance	postalCode
0	Turtle Tower Restaurant	Vietnamese Restaurant	645 Larkin St	btwn Eddy & Ellis	37.783989	-122.417764	[{'label': 'display', 'lat': 37.78398947390574...	397	94109
1	Tú Lan Restaurant	Vietnamese Restaurant	8 6th St	btwn Market St & Stevenson St	37.781987	-122.409977	[{'label': 'display', 'lat': 37.78198675959605...	514	94103
2	Basil Thai Restaurant & Bar	Thai Restaurant	1175 Folsom St	at Eighth	37.775388	-122.409253	[{'label': 'display', 'lat': 37.775388, 'lng':...	826	94103
3	The Chieftain Irish Pub & Restaurant	Irish Pub	198 5th St	at Howard St	37.781502	-122.404972	[{'label': 'display', 'lat': 37.78150216218952...	941	94103
4	Ryoko's Japanese Restaurant &	Sushi Restaurant	619 Taylor St	at Cosmo Pl	37.788183	-122.411882	[{'label': 'display', 'lat': 37.788183, 'lng':...	881	94102

Which can be visualised as such:

However, as we have 4 restaurants that meets the criteria of 8.0, two for loops were used to input the ID into a new data frame and retrieve the ratings. The results of our query indicate four restaurants having a rating above or at 8.0. Deeper dives were made on those restaurants with high ratings.

```
8.0
8.5
8.3
7.1
8.9
6.3
7.3
This venue has not been rated yet.
7.6
6.8
7.4
This venue has not been rated yet.
7.3
7.6
This venue has not been rated yet.
This venue has not been rated yet.
7.8
This venue has not been rated yet.
6.4
This venue has not been rated yet.
7.3
This venue has not been rated yet.
This venue has not been rated yet.
7.4
7.4
7.9
This venue has not been rated yet.
This venue has not been rated yet.
This venue has not been rated yet.
This venue has not been rated yet.
```

Again, repeat what we have done for Golden Kim Tar Restaurant, queries were made using the four restaurant's IDs to get the tips reviewed by the users.

The Turtle Tower Restaurant has a review of 8.0 with 117 tips available. This is the review for it:

	text	agreeCount	disagreeCount	id	user.firstName	user.id
0	Order the Chicken Pho, it's the best in the Bay area with a broth as delicious as it gets. If your up for a challenge add Pho Ga Long to your broth mixing chicken giblets to the mix.	3	0	545406bb498e43d4ed60d015	Staff Picks	86922724

The review is very positive and seems like the go-to place for Chicken Pho. However, it seems that this comment is stickied by the Staff of the restaurant. So, unsurprisingly, it is a good review. Regardless, there are 3 counts by the users that agree to this comment, so it should be a good choice.

Let's look at the second option. The Tú Lan Restaurant has a review of 8.5 with 144 tips available. This is the review for it:

	text	agreeCount	disagreeCount	id	user.firstName	user.lastName	user.id
0	AMAZING VIETNAMESE. I had the pho and the shrimp salad. Super duper tasty. They do take out and you'll have to queue for seats. Always room for one at the bar.	6	0	56466ebf498e5219f1fc7a9f	Harriet	R	111578617

This is another Vietnamese restaurant with great reviews and a go-to place for shrimp salad. It also has a considerable higher rating so it might be a better choice generally.

Let us move on the third one. Basil Thai Restaurant & Bar has a review of 8.3 with 100 tips available. This is the review for it:

	text	agreeCount	disagreeCount	id	user.firstName	user.lastName	user.id
0	You can almost always walk right in with no wait. My favorite items are the eggplant salad with shrimp and pork, and the peppercorn duck breast. Everything I've tasted has been good, though.	3	0	56eb15b4498e7f8447ee7b78	Jane	R	168464378

This is a Thai restaurant with interesting fusion food. The review is positive too.

Moving on to the last option and the most highly rated one. Ryoko's Japanese Restaurant & Bar has a review of 8.9 with 100 tips available. This is the review for it:

	text	agreeCount	disagreeCount	id	user.firstName	user.lastName	user.id
0	When late night munchies strike, there's no better place to be. The fresh fish in the sushi is outstanding and they also have a large number of imports from Tsukiji. Read more on WinstonWanders below!	12	0	5523f574498e1cb7c96aaebc	Mike	W	4083549

The review gave glowing reviews to the food offered by this restaurant, highlighting its freshness. This comment has 12 upvotes, the highest among these restaurants. It seems that this restaurant offers quality food and if I am craving for some Japanese food, this is the place to go.

5. Results and Discussions

This concludes our analysis. We have found the top-rated restaurants within the spherical radius of 300 metres and 1000 metres from the UC Hastings College of the Law respectively. This is the reviews from all five restaurants:

	text	agreeCount	disagreeCount	id	user.firstName	user.lastName	user.id
0	You can almost always walk right in with no wait. My favorite items are the eggplant salad with shrimp and pork, and the peppercorn duck breast. Everything I've tasted has been good, though.	3	0	56eb15b4498e7f8447ee7b78	Jane	R	168464378
1	Order the Chicken Pho, it's the best in the Bay area with a broth as delicious as it gets. If your up for a challenge add Pho Ga Long to your broth mixing chicken giblets to the mix.	3	0	545406bb498e43d4ed60d015	Staff Picks	NaN	86922724
2	AMAZING VIETNAMESE. I had the pho and the shrimp salad. Super duper tasty. They do take out and you'll have to queue for seats. Always room for one at the bar.	6	0	56466ebf498e5219f1fc7a9f	Harriet	R	111578617
3	You can almost always walk right in with no wait. My favorite items are the eggplant salad with shrimp and pork, and the peppercorn duck breast. Everything I've tasted has been good, though.	3	0	56eb15b4498e7f8447ee7b78	Jane	R	168464378
4	When late night munchies strike, there's no better place to be. The fresh fish in the sushi is outstanding and they also have a large number of imports from Tsukiji. Read more on WinstonWanders below!	12	0	5523f574498e1cb7c96aaebc	Mike	W	4083549

From the reviews, two observations could be made. The first observation that can be made is that there is a growing trend of popularity for Asian Food in San Francisco (2 Vietnamese, 1 Thai, 1 Japanese, and 1 Chinese potentially), or at least for the Civic Centre neighbourhood, as they made up the top restaurant list.

Secondly, the reviews from the top options are quite decent, which are not surprising considering they are the top options. Hence, they could all be recommended with consideration of how long you would like to travel. This list of restaurants could be recommended to the interested students.

6. Conclusions

The purpose of this project was to identify the most optimal restaurant given the limitation of distance to aid stakeholders (prospective students) in narrowing down their options mostly when they search for food in between classes, where time could be limited and travelling afar infeasible. By looking at

the ratings of the restaurants within 300 metres and 1000 metres respectively, the stakeholders' search cost could potentially be reduced, where they can gauge what are the options available within proximity and choose where they would like to frequent most.

Yet, akin to one of the most favourite response of a data scientists would reply to any question, that is 'it depends'. Indeed, the final decision on the most optimal restaurant will depend on the subjectivity of the stakeholders, just like many real-life scenarios.

7. Future Directions

This report is a very casual look at the 'best restaurant' in the area. Certainly, there are many more factors that can be taken into consideration when conducting this project. As a starter, a more scientific approach could be taken to define and fine-tune the metrics used to measure the 'best restaurant'. For instance, I could calculate the mean of ratings across the San Francisco area to find out the average rating, instead of using an arbitrary 8.0 as the defining metric. The metric could also be broken into more criteria, such as quality of service, quality of food, cleanliness, etc. While that is challenging as Foursquare does not seem to provide such information, some text mining could be done for sentiment analysis. Lastly, if I could pull more reviews from the query, it will provide a more balanced look at the restaurants.

Additionally, this data is based wholly on Foursquare data, a more in-depth analysis could be conducted using more review options, such as Yelp, Google Maps reviews, etc.