To Finding Location for Opening New Hotel

Fiyan Handoyo

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OUTLINE

- *Introduction*
- *Methodology*
- *Results*
- *Discussion*
- *Conclusion*

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INTRODUCTION

A beautiful tourist spot in southern India.Kanyakumari is a coastal town in the state of Tamil Nadu on India's southern tip. Jutting into the Laccadive Sea, the town was known as Cape Comorin during British rule and is popular for watching sunrise and sunset over the ocean.Kanyakumari is also home to the Statue of the Saint Poet Thiruvalluvar, one of the greatest Tamil poets in India. Standing at a massive height of 133 feet, the statue is one of the biggest in the entire Asian subcontinent and is the result of the hard work of over 500 sculptors.

Coming down to business problem,I would like to open a **hotel/restaurant** near beach side.As it is a famous tourist spot,there is already lots of attention towards it.I know there will be many competitors in terms of hotel and restauramt.But keeping them in mind,i need to locate my hotel in place where more people are attracted and comfortable for a stay and a good meal.I want to bring foreign and local peoples attention towards my new hotel.I would like to flavour my retaurant recipe with Italian,American,typical south & north indian foods to grab their taste.

METHODOLOGY

In this sections we will perform some data analysis and EDA to find insight from data.We will try to understand the current stats of all given data.Probably,clustering or centroid of all venues will help us to locate new hotel.

- *Analysis data descriptive*

- *Exploration data*

- *Data Visualization*

RESULTS

My hotel location
- Final location is pointed at **8.07985,77.54973**
- This location is **at Beach Road opposite to Gandhi Memorial and Kumari Temple.**
- Located at exact junction of two cross roads which can give more attention to people who passby.
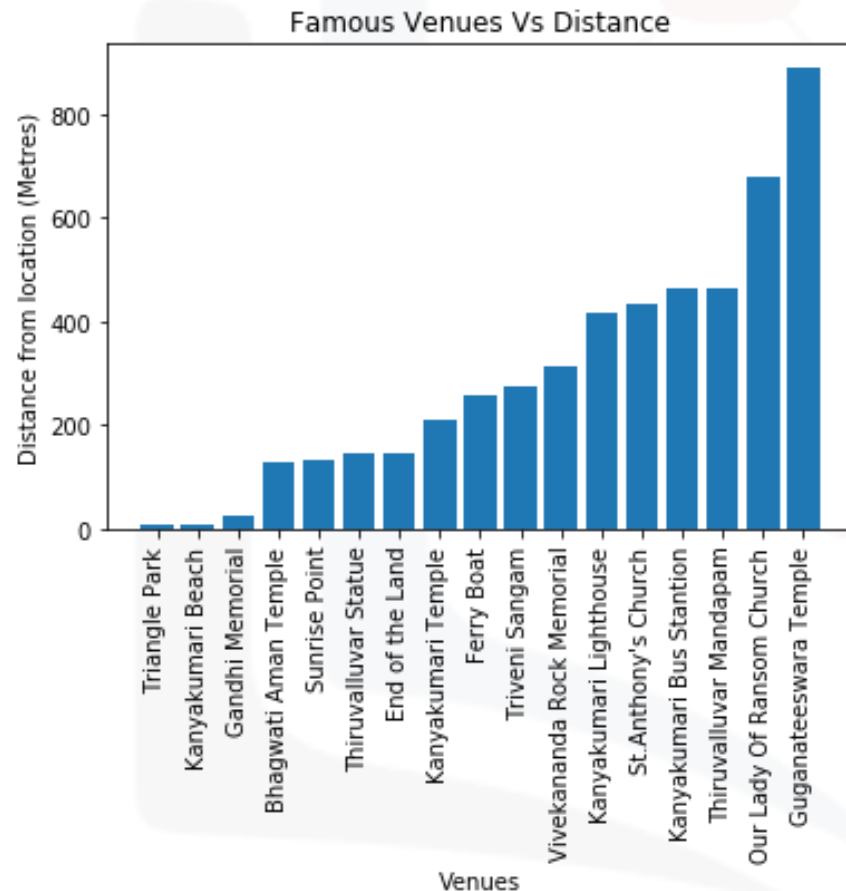
Top Rated Venues
- Sunrise Point
- Vivekananda Rock Memorial
- End of the Land
- Kanyakumari Beach
- Triveni Sangam
- Gandhi Memorial
- All these venues are rated well than other and also they have more tips and located within 320 metres to core location of kanyakumari.So tourists may like to visit these places.

RESULTS
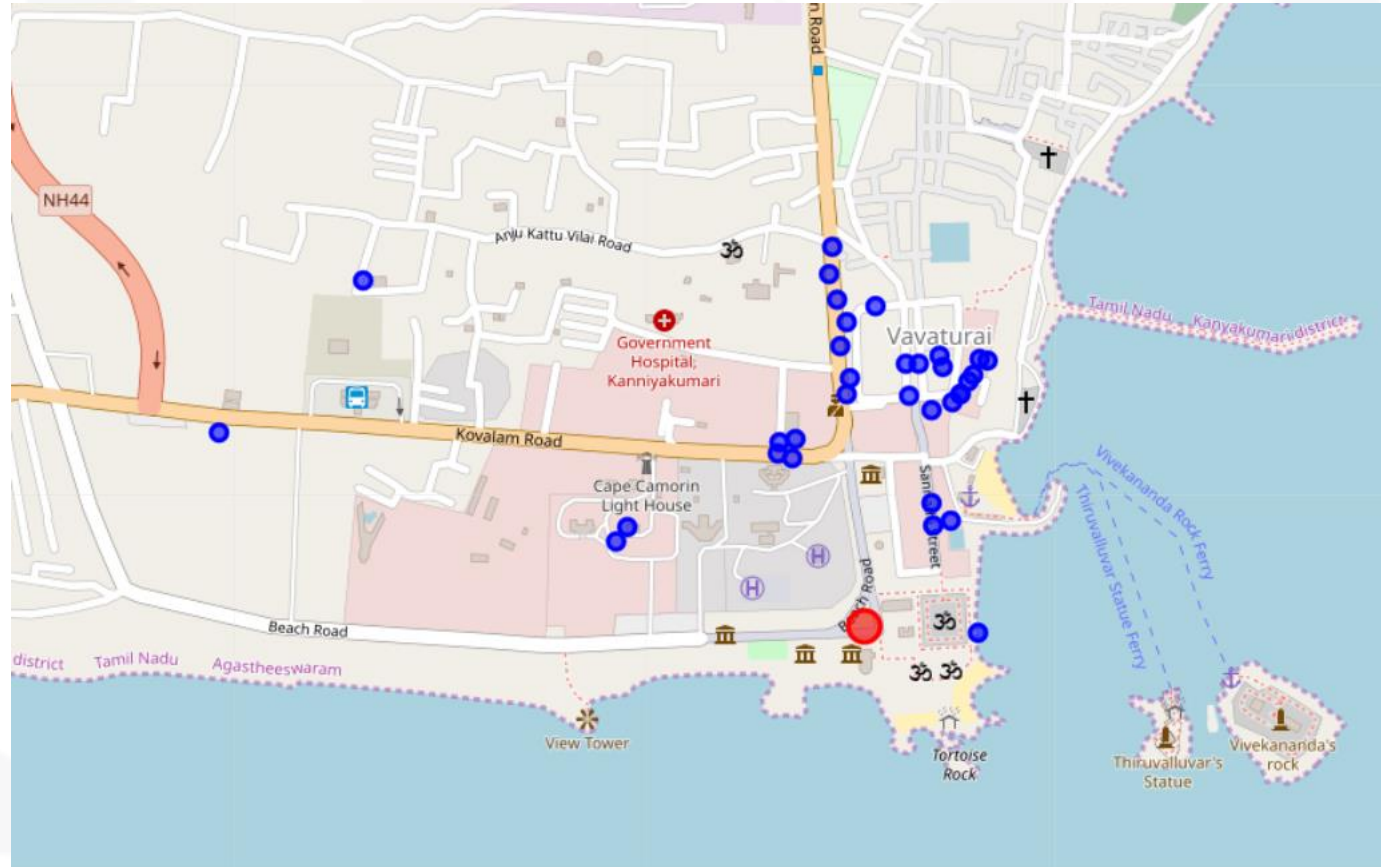
Spot my hotel against others
- Green - My hotel location
- Red - Kanyakumari core location.
- Black - Venues.
- Blue - Other hotels.
- My predicted location and core location are very close to each other which is expected.As this has central attraction,the predicted one almost matched with the core.
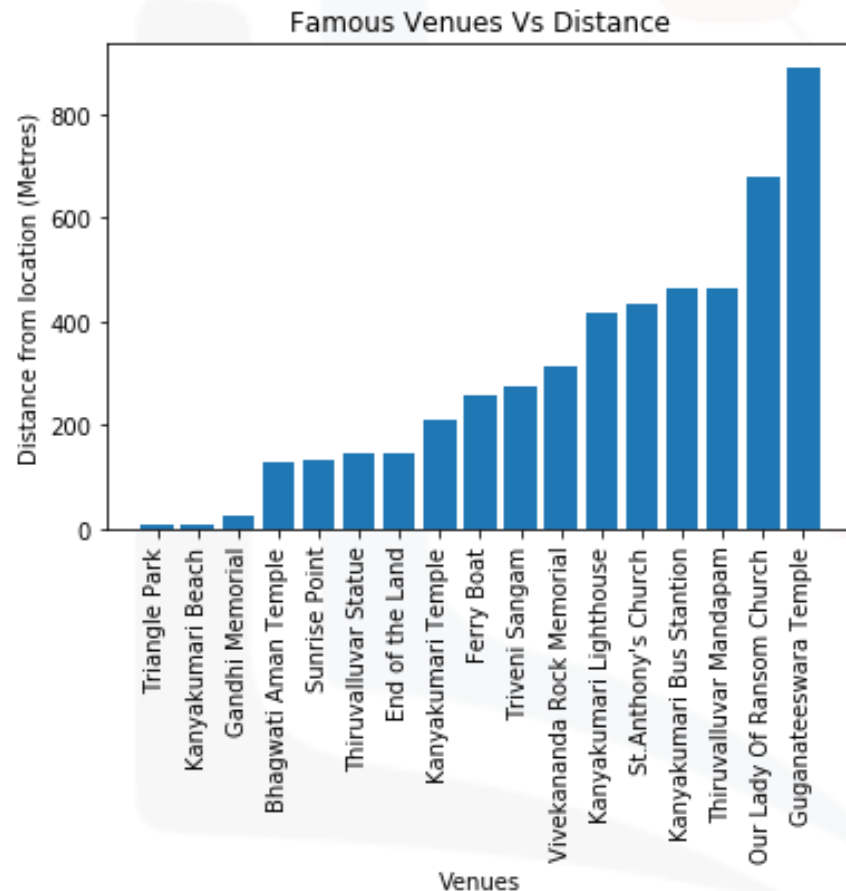
HOTELS

Famous Venues Vs Distance

- *There are 36 hotels/restaurants within 1 km radius captured through foursquare data.*
- *Tri Star hotel is closest of all other hotels.*
- *Singar's hotel remains far comparative to rest of hotels/restaurants.*
- *Average distance between all hotels to core location is 454 meters*
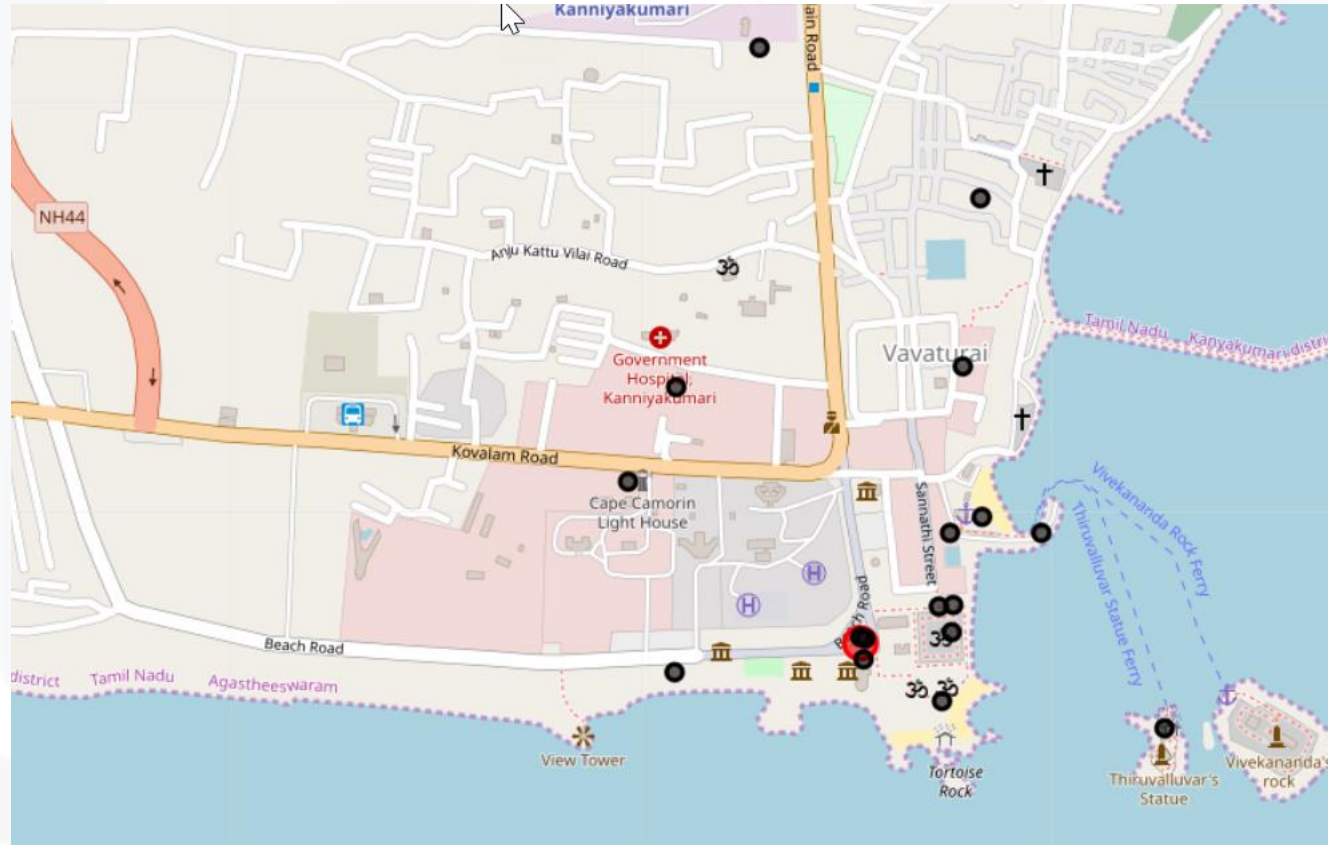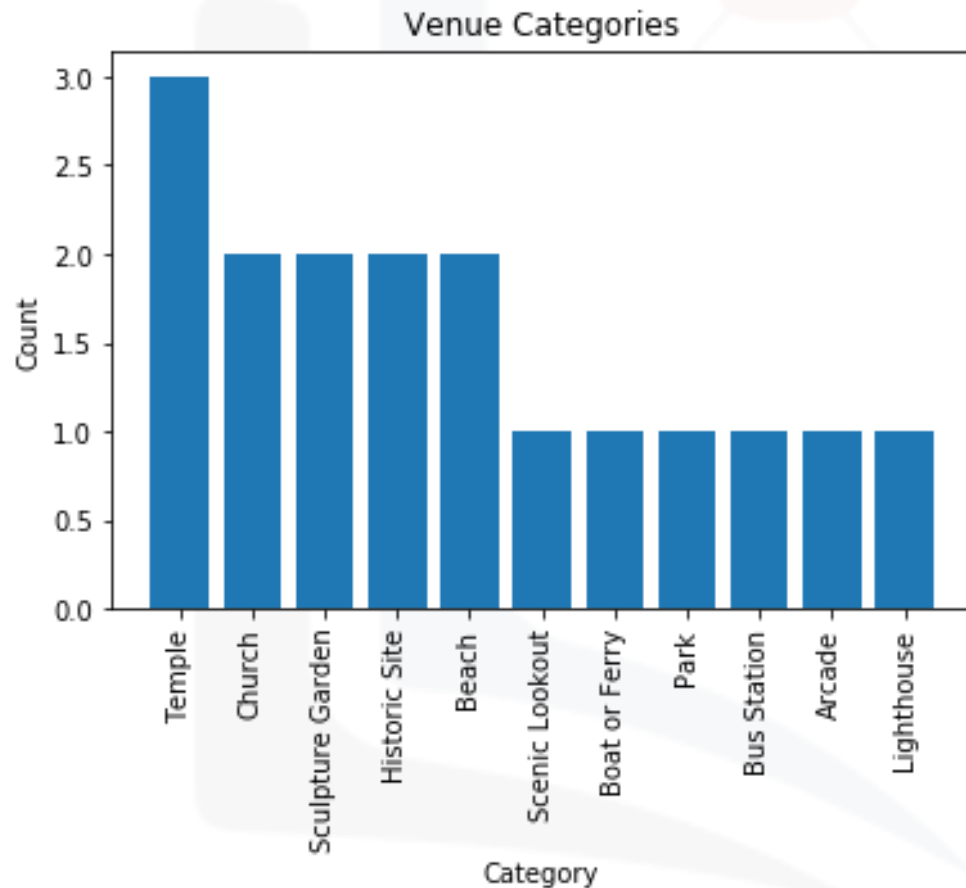
MAP - HOTELS

VENUES

- *There are 17 venues within 1 km radius captured through foursquare data.*
- *We could see Kanyakumari beach,*
- *Gandhi Memorial, Triangle Park are more closer to our location.*
- *Guganateswara temple is far than rest of places.*
- *Bus station is also an important venue which is 465 metres from our location*

MAP-VANUES

VENUES CATEGORIES

- *There are 11 venue categories found in the data*
- *We could see that Temple, Beach, Historic sites and Church are more common venues.*
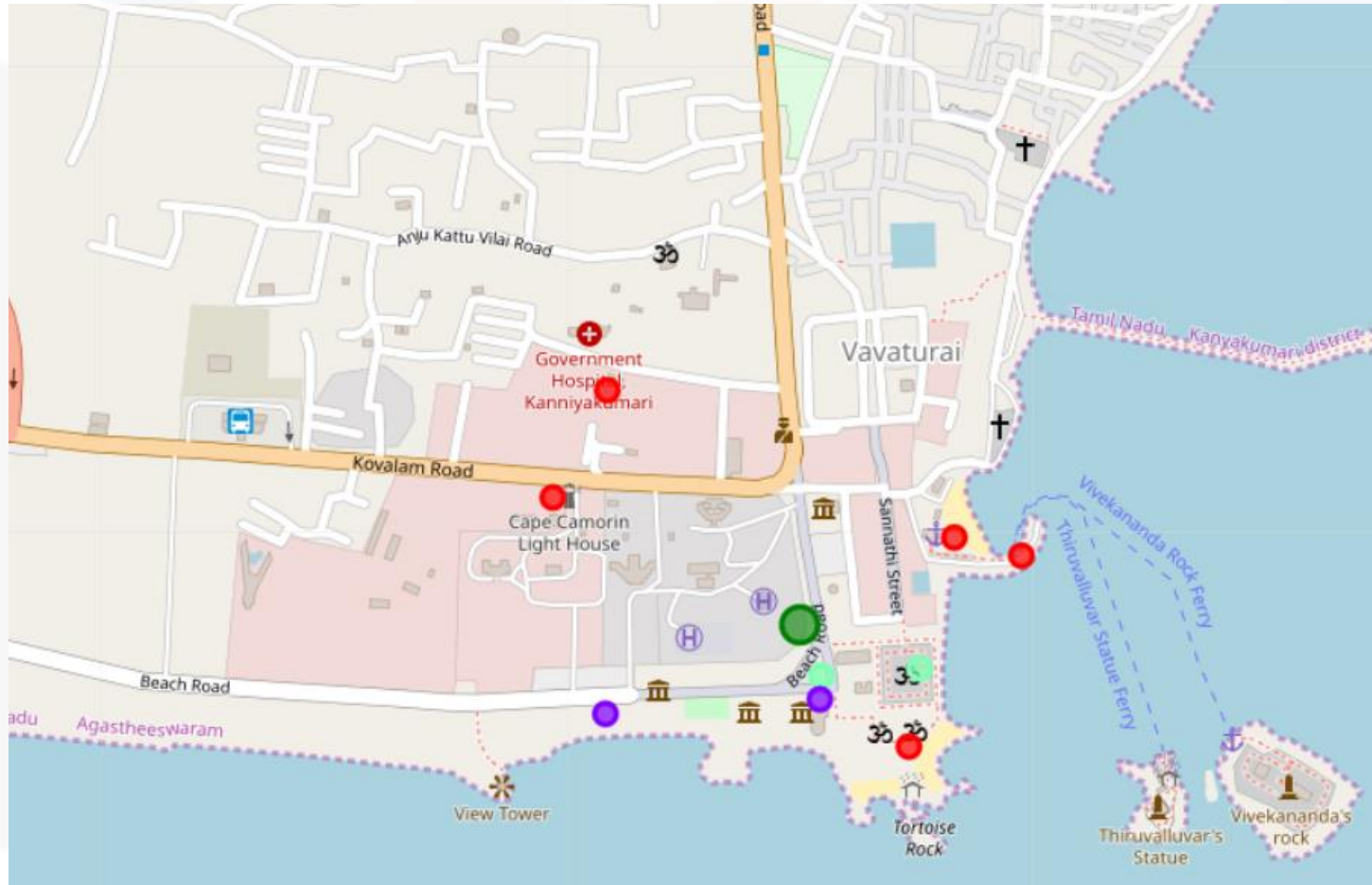- *There is no venue with high variations.*

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RSTING AND TIPS

	Venue	Rating	distance	Tips
0	Sunrise Point	8.5	135	4
1	Vivekananda Rock Memorial	8.2	312	16
2	End of the Land	7.5	148	2
3	Kanyakumari Beach	6.9	10	3
4	Triveni Sangam	6.9	277	1
5	Ferry Boat	No Rating Yet	259	3
6	Gandhi Memorial	5.4	26	2
7	Kanyakumari Lighthouse	No Rating Yet	417	1
8	Kanyakumari Bus Stantion	No Rating Yet	465	1

- *Sunrise point has got highest rating.*
- *Vivekananda Rock memorial has got highest number of times.*
- *Other interested venues could be Kanyakumari beach, Gandhi memorial, light house*
- *Other venues which are not in the given list didn't receive any tips or rating*
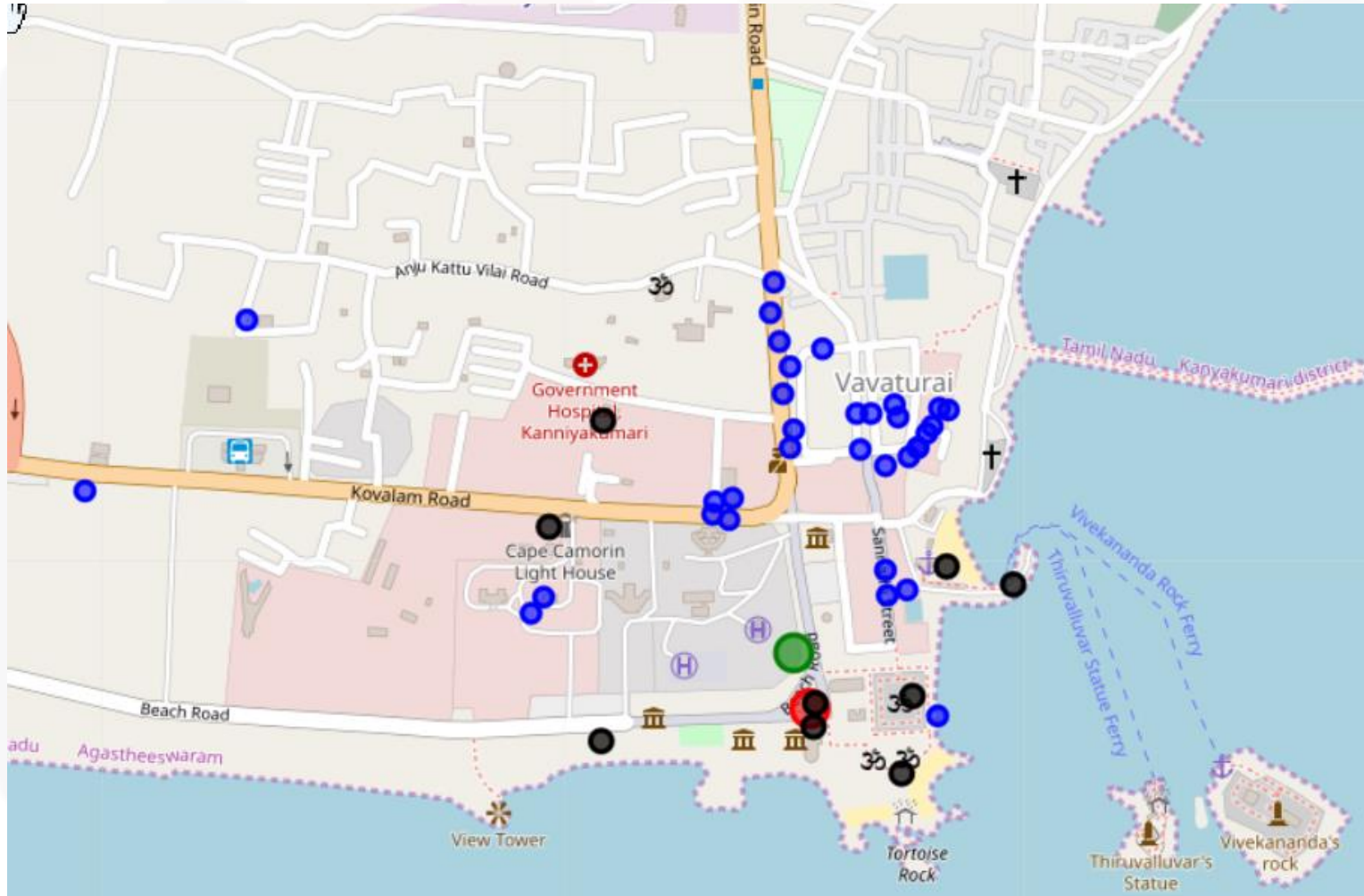
Clustering and Midpoint of venues

- *The ideology behind this could be to produce the center location of all famous top rated/tips venues.*
- *First we will find the clusters and based on it, we will take average of all centroids.*
- *Secondly, we will get midpoint of all shortlisted rated venues.*
- *Now we will get mean of both and decide our final location*
- *We looked for three clusters and they were sorted out as shown in map(next slide)*

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Clustered Map

Combine

Analysis Location

- *Final location is pointed at **8.07985,77.54973** This location is **at Beach Road opposite to Gandhi Memorial and Kumari Temple.***

- *Located at exact junction of two cross roads which can give more attention to people who pass by*

- *Main venues are Sunrise Point ,Vivekananda Rock Memorial ,End of the Land , Kanyakumari Beach.*

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DISCUSSION & CONCLUSION

- *The output which we achieved was very adjacent to the core location. This proves the accurate spotting of our predicted algorithm.*
- *As a business person , one would be able to set up a hotel/restaurant on given spot. This will bring revenue automatically as we have located in very near to core one. We proved this with combination of Kmeans and midpoint of coordinates.*
- *Despite of the findings, there were some lack in data. Tips and ratings were missing for most of the venues. Also when I compared foursquare data with google map ,I could see there were many hotels and venues found missing in foursquare.*

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