RESTAURANT RECOMMENDER SYSTEM IN YANGON

IBM DATA SCIENCE CAPSTONE PROJECT

INTRODUCTION

- Business Understanding
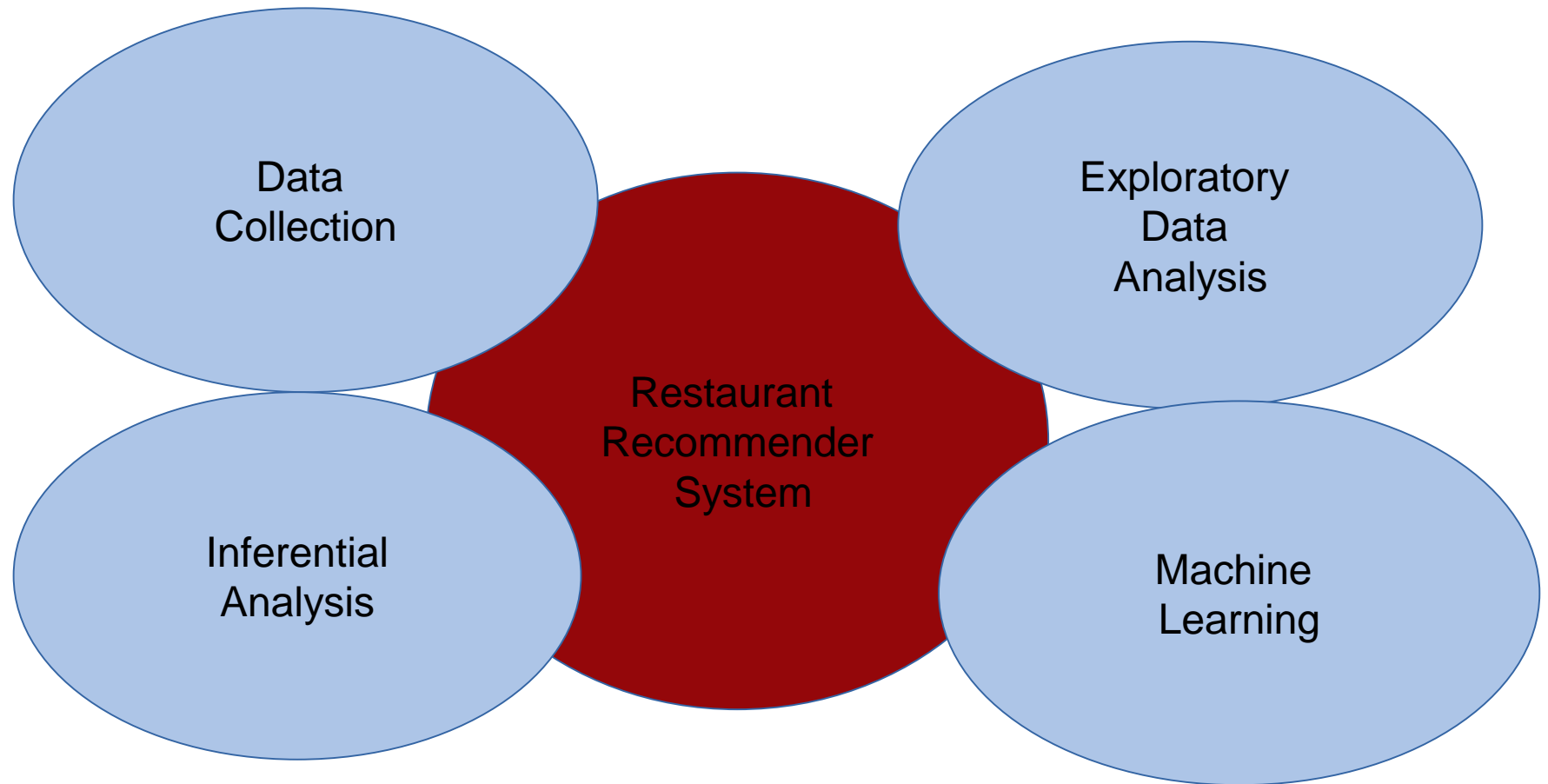
- Data Understanding

- Methodology

- Conclusion

Business Understanding

- Recommender system is one of the best way for everyone can easily check based on its references.

- Purpose for this project is not only for the travelers but also everyone who rarely use restaurants would prefer to have the most rated restaurants nearby them and all this could be easily handed by our recommender system.

- It is basically everyone who is exploring different places or similar places and they can easily check the restaurant rating around them.

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Data Understanding

- Before creating restaurant recommender system , we need data that can collect everywhere but we have to know which data is related in our system .

- I considered the basic requirements in this scenario:

- Firstly , I checked the location where I am so that I have used the google map to find the location so that I have used the data which are longitude and latitude to find out my current location.

- Another one is population of the neighborhoods because I would like to know which restaurant is convenient for me, even though I find lots of restaurant near me.

Methodology

Data Collection

Unnamed: 0		Borough	Neighborhoods	Population	Longitude	Latitude
0	0	Western District (Downtown)	Ahlon	41200	96.127778	16.783056
1	1	Western District (Downtown)	Bahan	81000	96.152222	16.808056
2	2	Western District (Downtown)	Dagon	25082	96.149722	16.780833
3	3	Western District (Downtown)	Kyauktada	37000	96.158756	16.774422
4	4	Western District (Downtown)	Kyimyindaing	73200	96.124167	16.803056
5	5	Western District (Downtown)	Lanmadaw	47160	96.149722	16.780833
6	6	Western District (Downtown)	Seikkan	1250	96.150000	16.766667
7	7	Western District (Downtown)	Latha	27500	96.149722	16.780833
8	8	Western District (Downtown)	Pabedan	40000	96.155556	16.780278
9	9	Western District (Downtown)	Sanchaung	65300	96.135000	16.806389

	Borough	Neighborhoods	Population
0	Western District (Downtown)	Ahlon	41200
1	Western District (Downtown)	Bahan	81000
2	Western District (Downtown)	Dagon	25082
3	Western District (Downtown)	Kyauktada	37000
4	Western District (Downtown)	Kyimyindaing	73200

Figure 1.1 : list of neighborhoods in Yangon

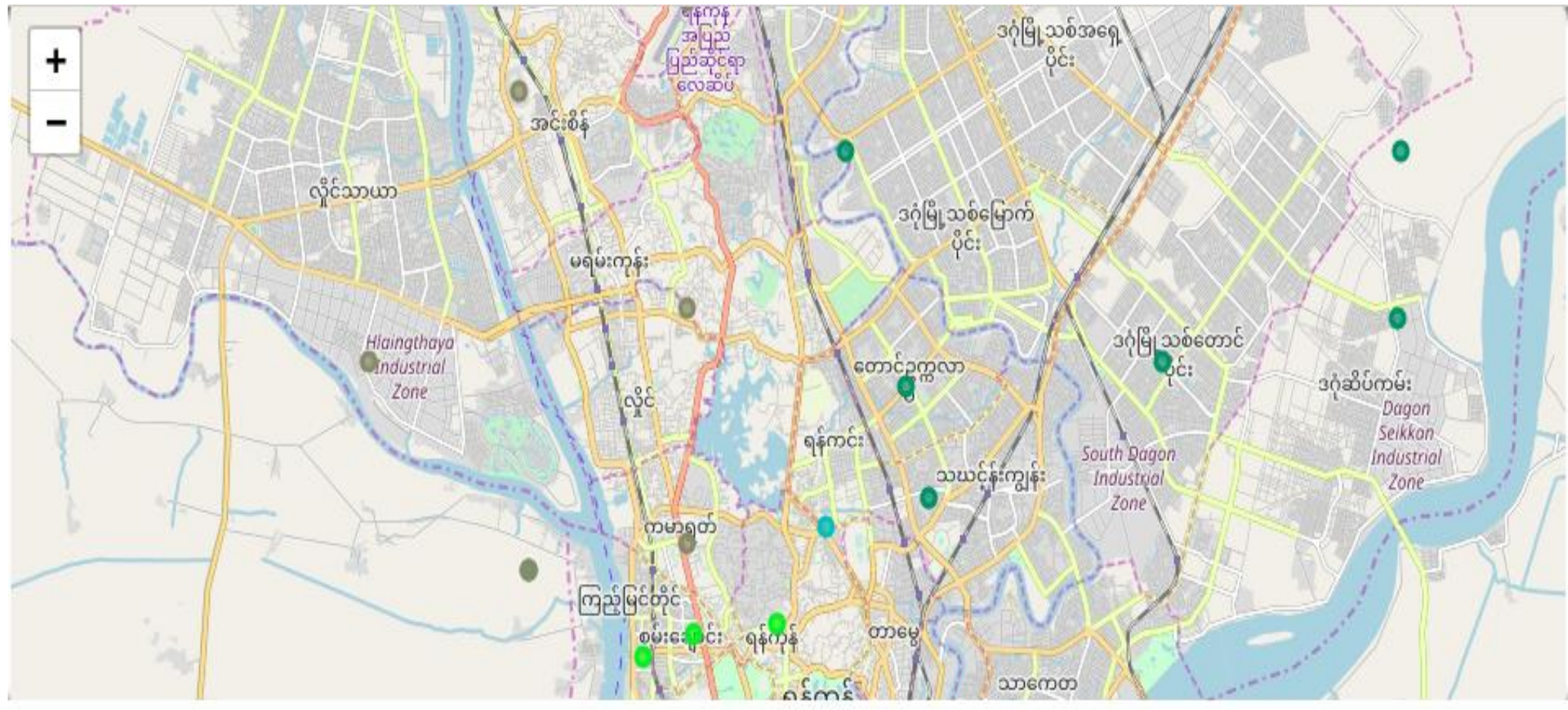**Figure 1.2: Population in Yangon**

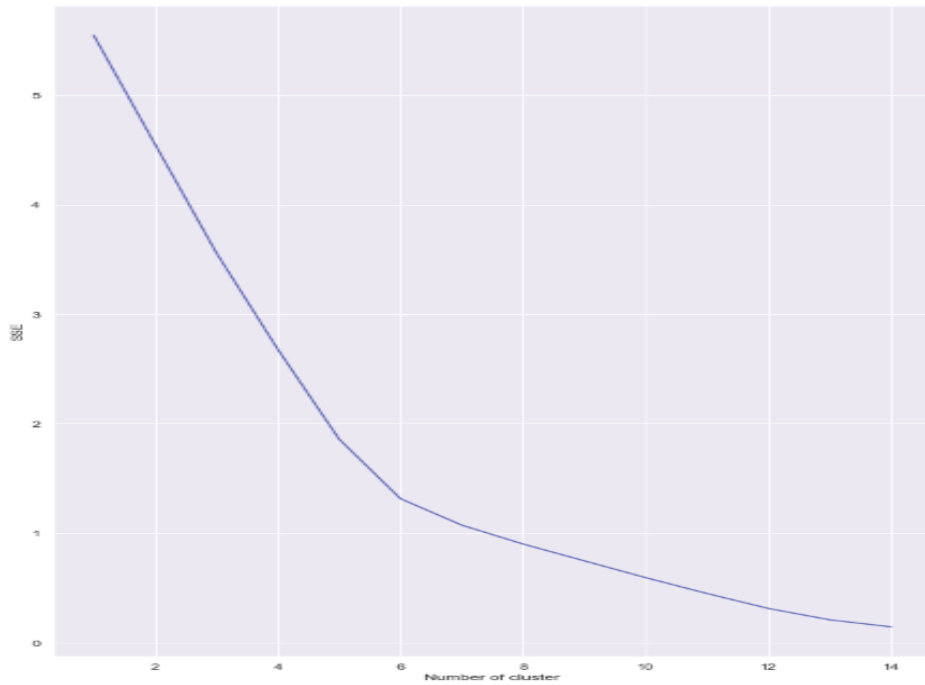Figure 2: Exploring Yangon Neighborhoods using FourSquare API

Figure 3.1: Clusters Graph

	Neighborhood	Borough	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Ahlon	Western District (Downtown)	16.783056	96.127778	Urban 86 Food Court	16.782257	96.126869	Food Stand
1	Ahlon	Western District (Downtown)	16.783056	96.127778	Sein Gay Har @ Pyay Road	16.781087	96.127681	Shopping Mall
2	Ahlon	Western District (Downtown)	16.783056	96.127778	Meringue Café	16.786160	96.128021	Café
3	Ahlon	Western District (Downtown)	16.783056	96.127778	Apple Hotpot & Dim Sum	16.786116	96.130737	Dim Sum Restaurant
4	Ahlon	Western District (Downtown)	16.783056	96.127778	Western Park Ruby	16.786108	96.130772	Dumpling Restaurant

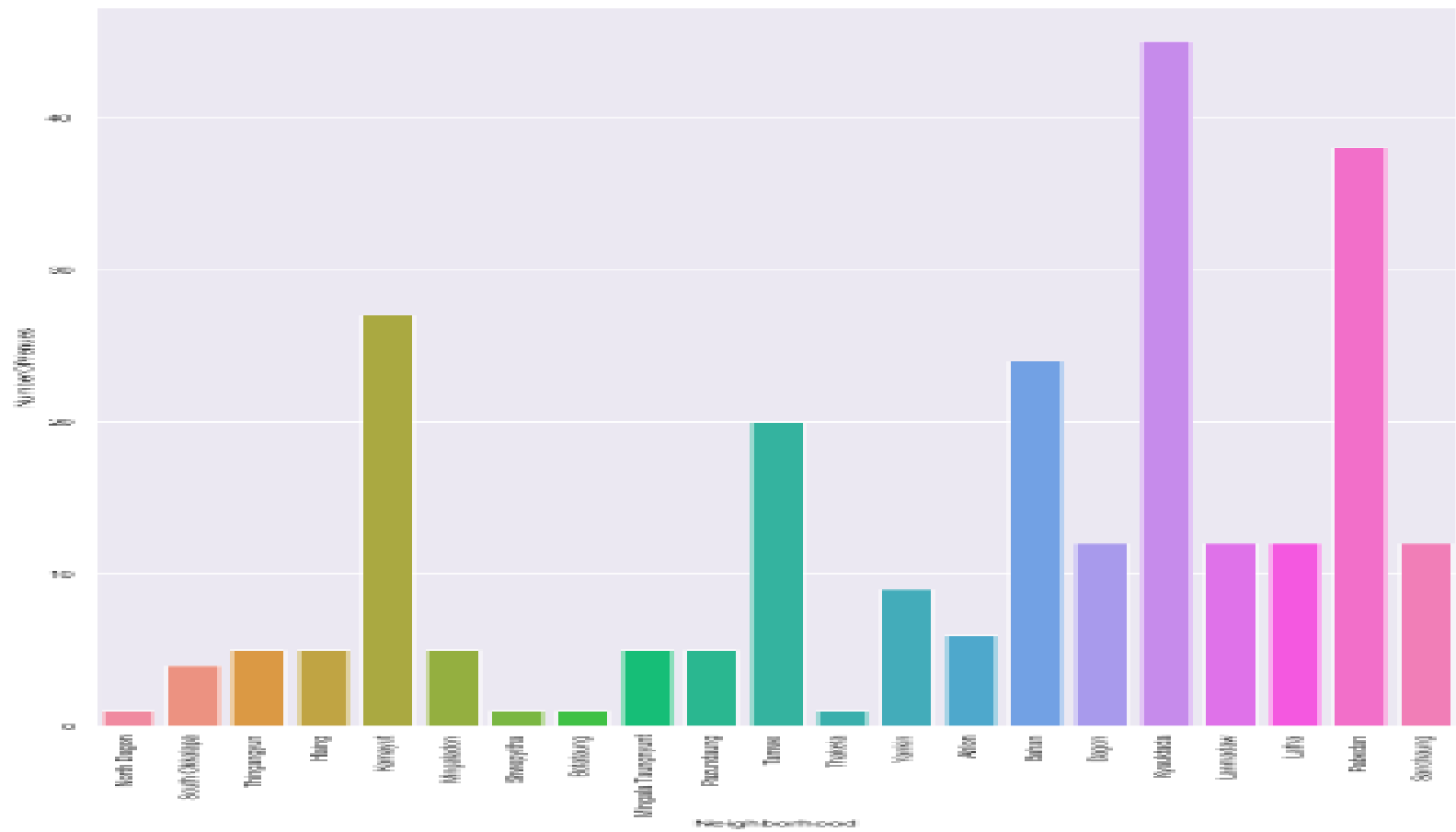Figure 3.2 : Number of Venues

Figure 4 : Number of neighborhoods in Yangon

Results And Conclusion

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********* Ahlon *********
                             Venue  Frequency
0   Venue Category_Dim Sum Restaurant      0.17
1        Venue Category_Noodle House       0.17
2              Venue Category_Café         0.17
3   Venue Category_Dumpling Restaurant     0.17
4        Venue Category_Shopping Mall      0.17


********* Bahan *********
                             Venue  Frequency
0   Venue Category_Japanese Restaurant     0.17
1             Venue Category_Hotel         0.08
2          Venue Category_Pizza Place      0.08
3   Venue Category_Chinese Restaurant      0.08
4             Venue Category_Spa           0.04
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Figure 5.1 : Venues occur each neighborhoods showing the number of frequency

Neighborhood		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
6	Bahan	Venue Category_Japanese Restaurant	Venue Category_Hotel	Venue Category_Chinese Restaurant	Venue Category_Pizza Place	Venue Category_Bookstore	Venue Category_Dessert Shop	Venue Category_Moving Target	Venue Category_Café
7	Bahan	Venue Category_Japanese Restaurant	Venue Category_Hotel	Venue Category_Chinese Restaurant	Venue Category_Pizza Place	Venue Category_Bookstore	Venue Category_Dessert Shop	Venue Category_Moving Target	Venue Category_Café
8	Bahan	Venue Category_Japanese Restaurant	Venue Category_Hotel	Venue Category_Chinese Restaurant	Venue Category_Pizza Place	Venue Category_Bookstore	Venue Category_Dessert Shop	Venue Category_Moving Target	Venue Category_Café
9	Bahan	Venue Category_Japanese Restaurant	Venue Category_Hotel	Venue Category_Chinese Restaurant	Venue Category_Pizza Place	Venue Category_Bookstore	Venue Category_Dessert Shop	Venue Category_Moving Target	Venue Category_Café
10	Bahan	Venue Category_Japanese Restaurant	Venue Category_Hotel	Venue Category_Chinese Restaurant	Venue Category_Pizza Place	Venue Category_Bookstore	Venue Category_Dessert Shop	Venue Category_Moving Target	Venue Category_Café

Figure 5.2 : Recommend the neighborhoods cities near Kyauktada city In Yangon

THANK YOU