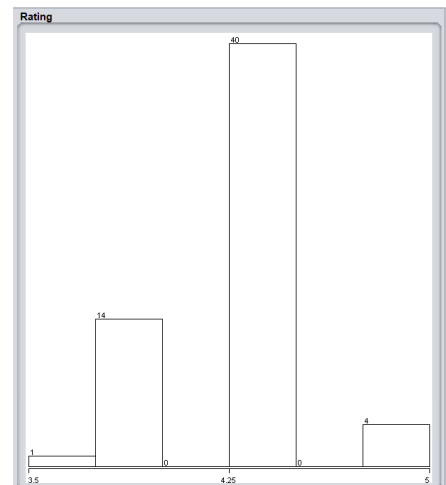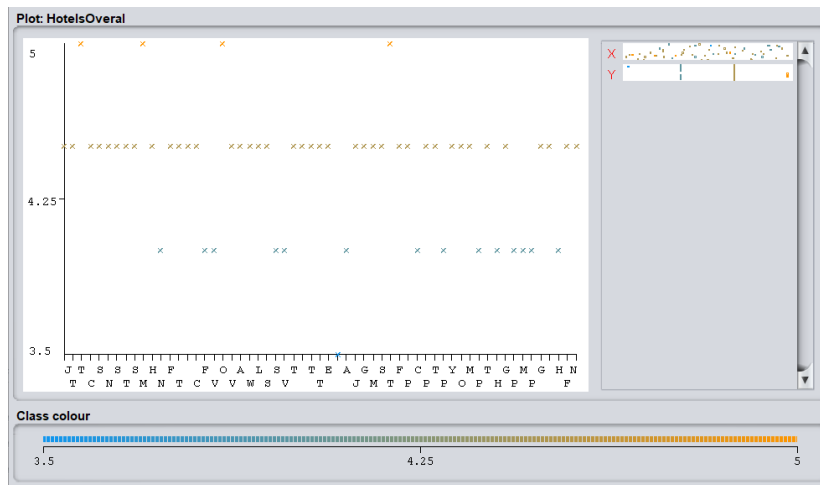# CS-2376

VISUALISATION & DECISION SUPPORT

Manya Sachdev, Pratham Singh, Shivani

30.04.2021

Clustering

Algorithm used: K-Means Clustering Algorithm

Hotel Name	Rating	Hotel Name	Rating	Hotel Name	Rating
Berjaya Times Squa	3.5	JW Marriott Hote	4.5	Four Points by She	4.5
Novotel Bangkok o	4	The Quarter Ladp	4.5	The Majestic Hote	4.5
FuramaXclusive Sa	4	Chatrium Hotel Ri	4.5	The Westin Kuala I	4.5
Vic3 Bangkok	4	SKYVIEW Hotel Ba	4.5	Element Kuala Lun	4.5
Sunway Putra Hote	4	Novotel Bangkok	4.5	JW Marriott Kuala	4.5
VE Hotel Residence	4	Sponsored Chern	4.5	Grand Hyatt Kuala	4.5
ANSA Hotel Kuala I	4	The Quarter Ari b	4.5	Mandarin Oriental	4.5
Changi Cove	4	Shangri-La Hotel I	4.5	Shangri La Hotel Ki	4.5
Park Hotel Clarke C	4	Hotel Verve	4.5	Four Seasons Hote	4.5
PARKROYAL COLLE	4	FuramaXclusive A	4.5	PARKROYAL COLLE	4.5
Hotel G Singapore	4	The Raweekanlay	4.5	Pan Pacific Singapo	4.5
PARKROYAL on Bea	4	Centara Grand at	4.5	The Fullerton Hote	4.5
Mandarin Orchard	4	Craftsman Bangko	4.5	YOTEL Singapore	4.5
Park Hotel Farrer P	4	Vince Hotel	4.5	Orchard Hotel Sing	4.5
Hotel Boss	4	Aloft Kuala Lumpi	4.5	Marina Bay Sands	4.5
The Quarter Phron	5	W Kuala Lumpur	4.5	The Capitol Kempi	4.5
Mandarin Oriental	5	Le Meridien Kuala	4.5	Grand Park City Ha	4.5
Oakwood Suites Ba	5	Sunway Velocity I	4.5	Goodwood Park He	4.5
The RuMa Hotel ar	5	The St Regis Kuala	4.5	Pan Pacific Service	4.5
		Naumi Hotel Sing	4.5	Four Seasons Hote	4.5

 Cluster 1

 Cluster 2

 Cluster 3

Sentiment Analysis

1. Polarity Score of each comment v/s Actual Rating by User

Bangkok

Kuala Lumpur

Singapore
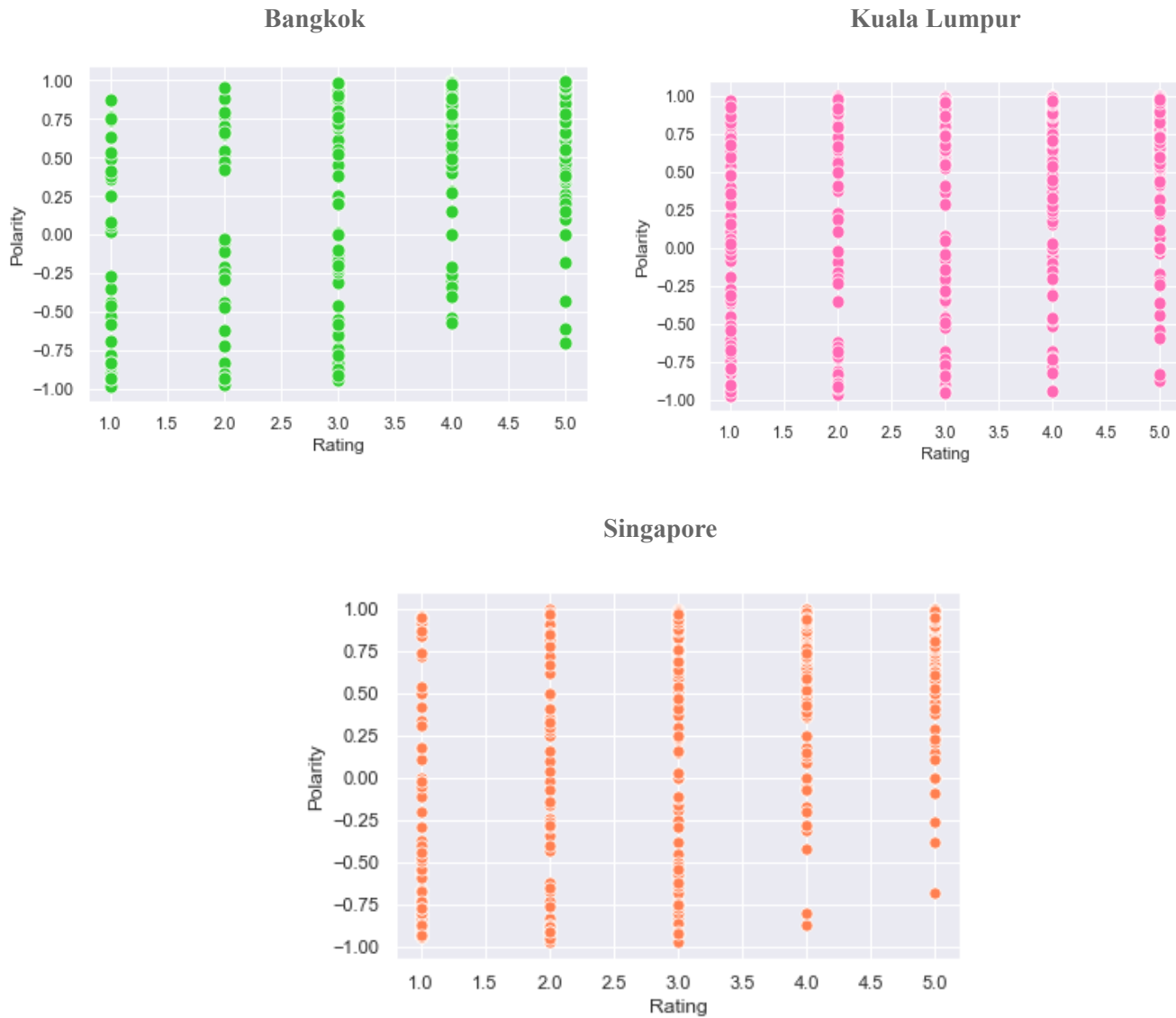
To calculate the polarity score, we used the NLTK library's sentimentintensityanalyzer() function. We assigned a polarity score to each comment made by the users. The range of the score was +1 to -1 where +1 depicts a positive comment whereas -1 depicts a negative comment. When we plotted the polarity scores for each comment against their respective user rating, we got some interesting insights. We find that the rating of the user increases as we move upwards on the Y-axis which means that the user ratings were reflective of the comments that the users made along with them.
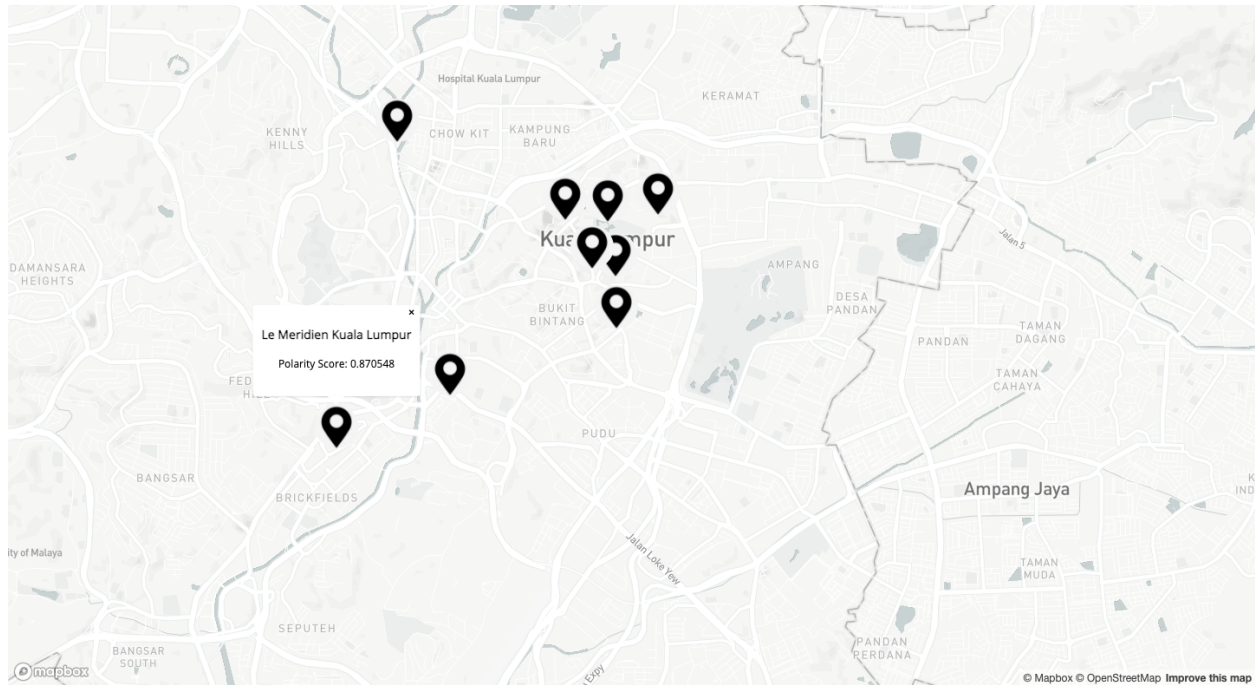
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2. Overall Polarity Score v/s Overall Rating of Hotel

Bangkok

Kuala Lumpur

Singapore
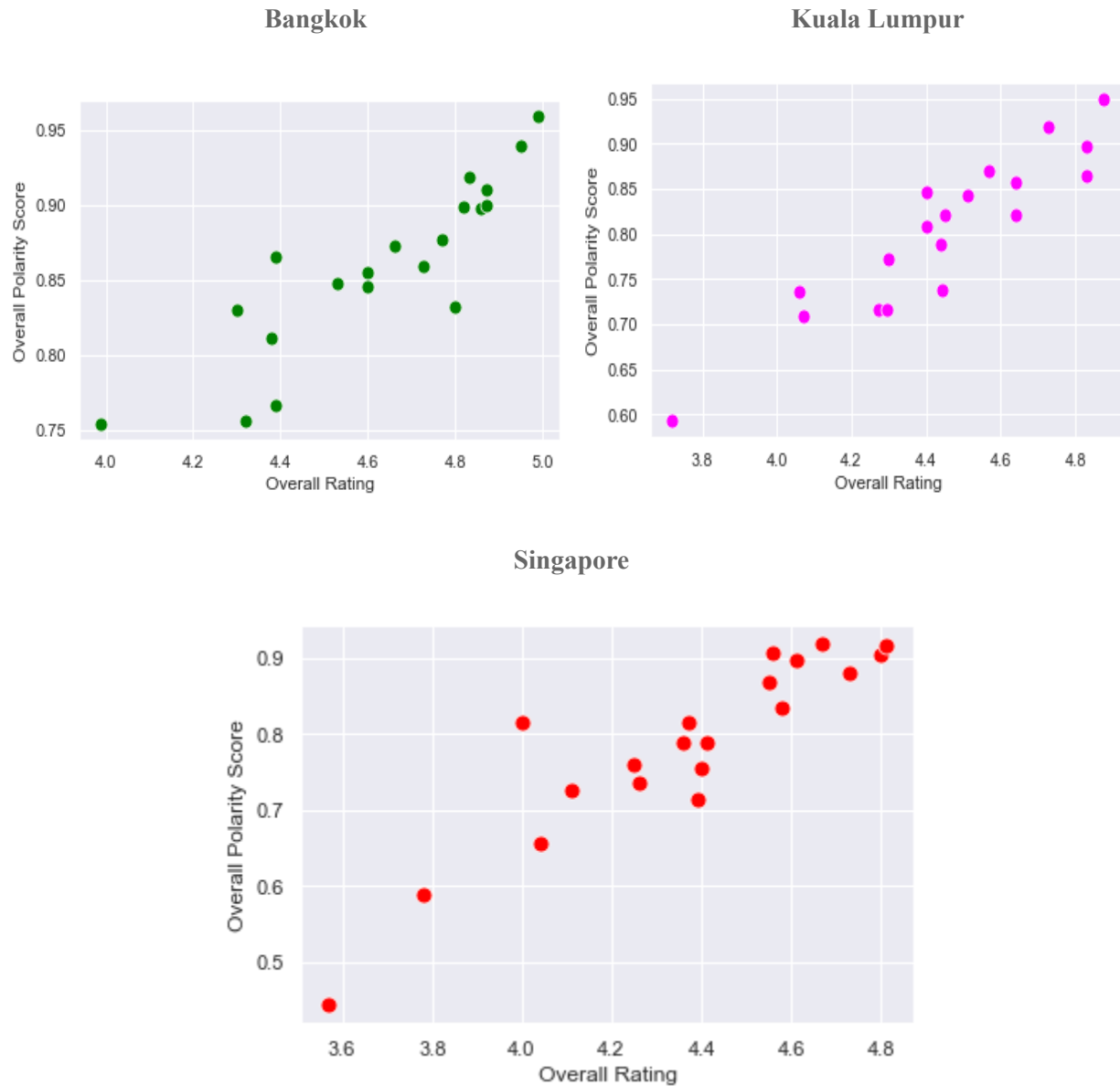
To calculate the Overall Polarity Score, we calculated the mean of all the polarity scores for each comment made by the user for a particular hotel. We plotted that against the Overall Rating of the hotel. We found that the Polarity Score of each hotel was consistent with its Overall Rating which means that hotels with good Overall Rating generally had positive comments by the users.

Maps

Polarity

Overall