

# Data Mining & Data Warehousing Project - 2

## Clustering Algorithms - Final Report

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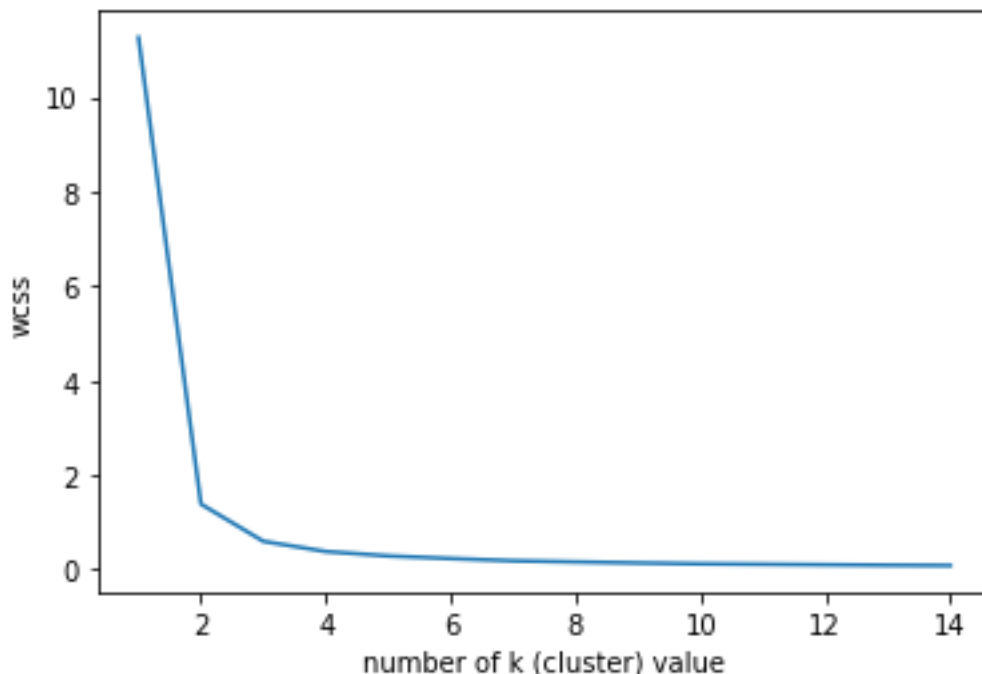
Seat No: **B18101071**

Task	Description
Source	<a href="https://archive.ics.uci.edu/ml/datasets/Online+Shoppers+Purchasing+Intention+Dataset">https://archive.ics.uci.edu/ml/datasets/Online+Shoppers+Purchasing+Intention+Dataset</a>
Columns & Rows Count	18, 12330
Pre Processing	<ul style="list-style-type: none"><li>• Used only bounce rates and exit rates.</li><li>• Both having 0's and outliers.</li><li>• Treated only bounce rates. Exit Rates automatically become set after treating bounce rates.</li><li>• Replacing 0's with random numbers within the range of bounce rates.</li><li>• Removed outliers using IQR.</li><li>• Displayed box plot of both. Both having no outliers now.</li></ul>

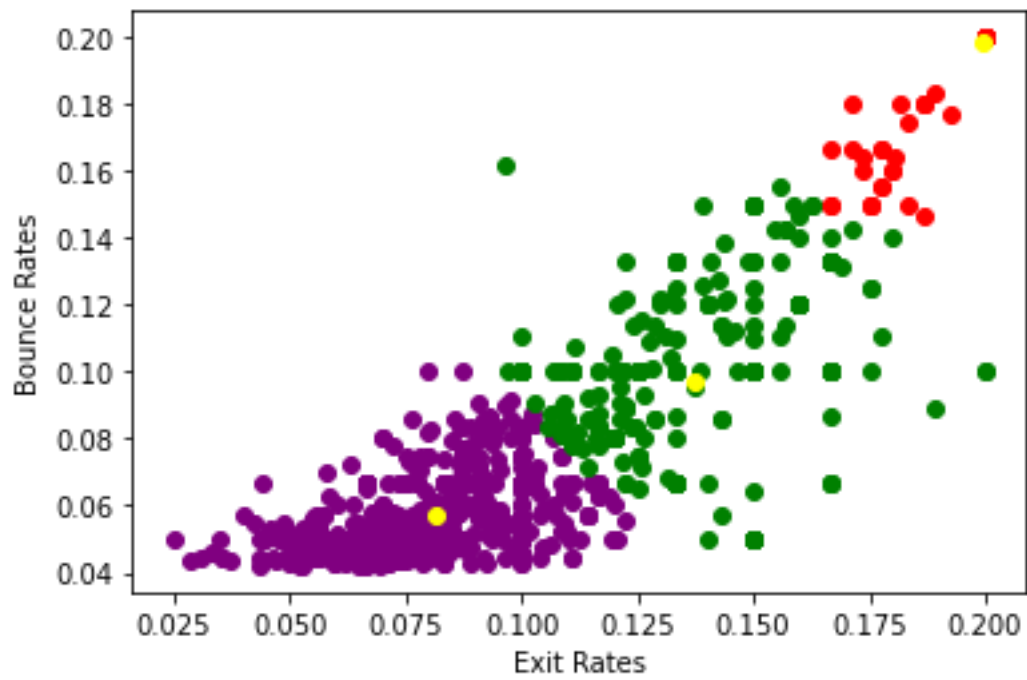
GitHub Link: [https://github.com/HaziqueIqbal/Clustering\\_Project](https://github.com/HaziqueIqbal/Clustering_Project)

## K-Mean

### • Elbow Plot

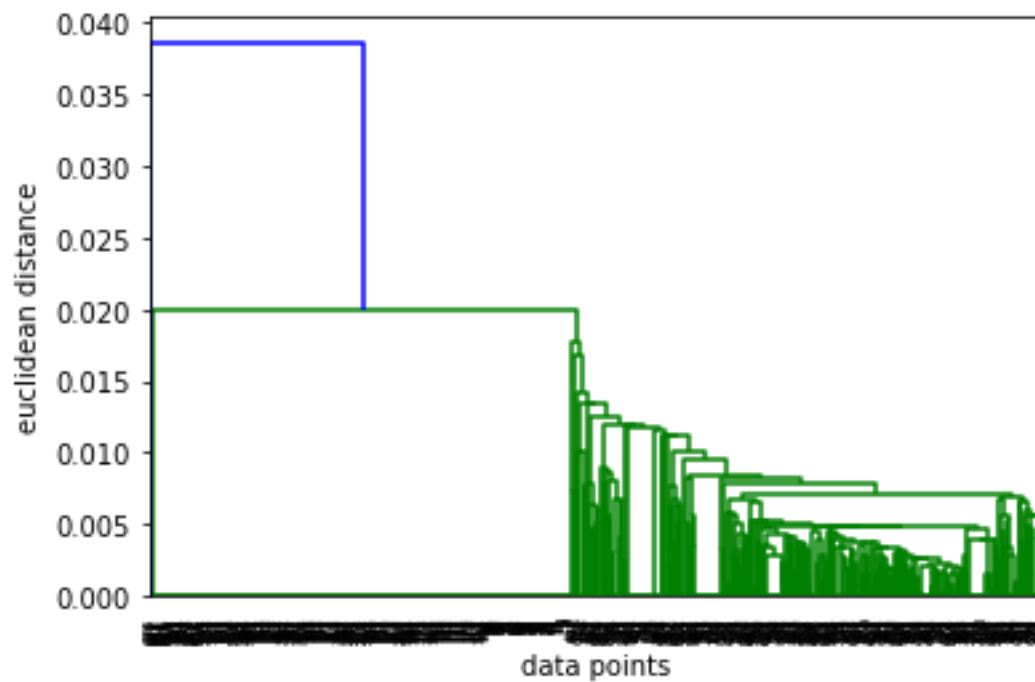


- Output of K-Mean

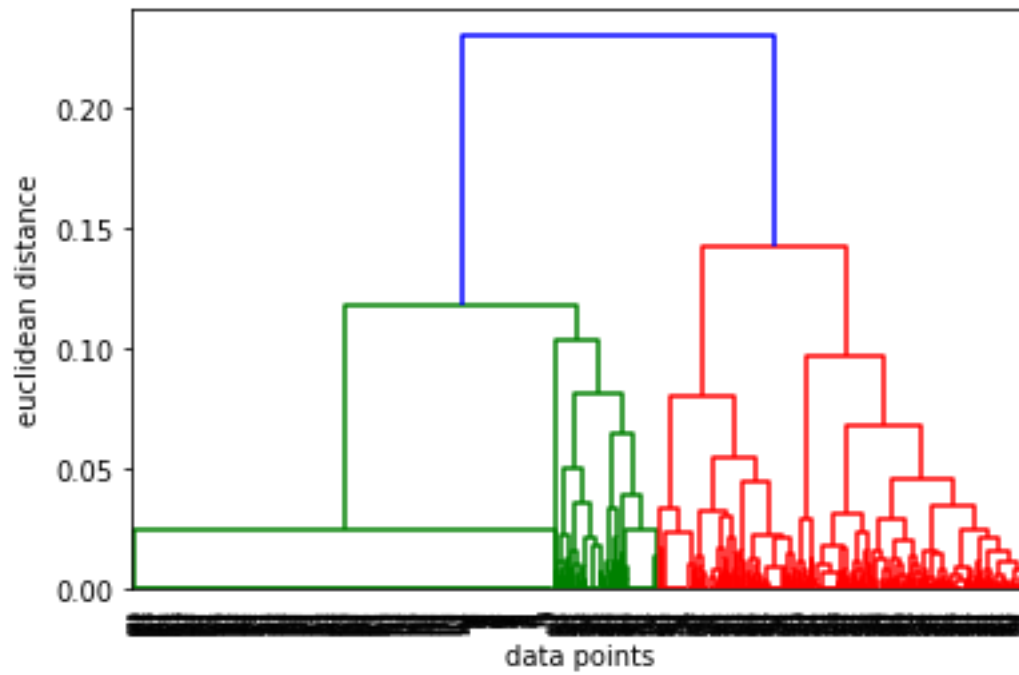


## Hierarchical Clustering

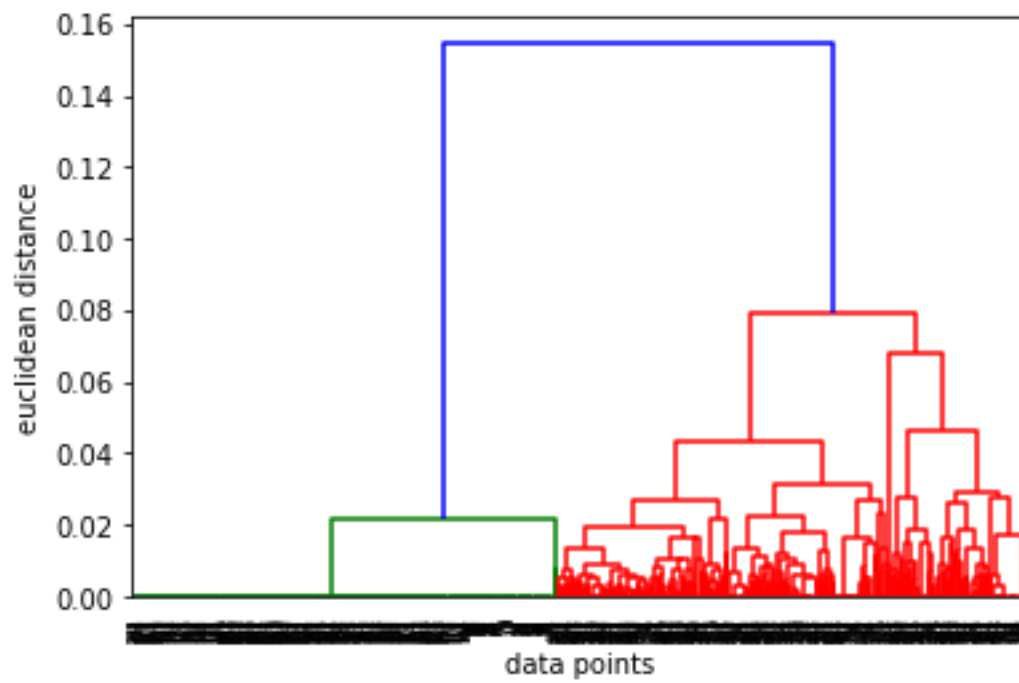
- Single Linkage



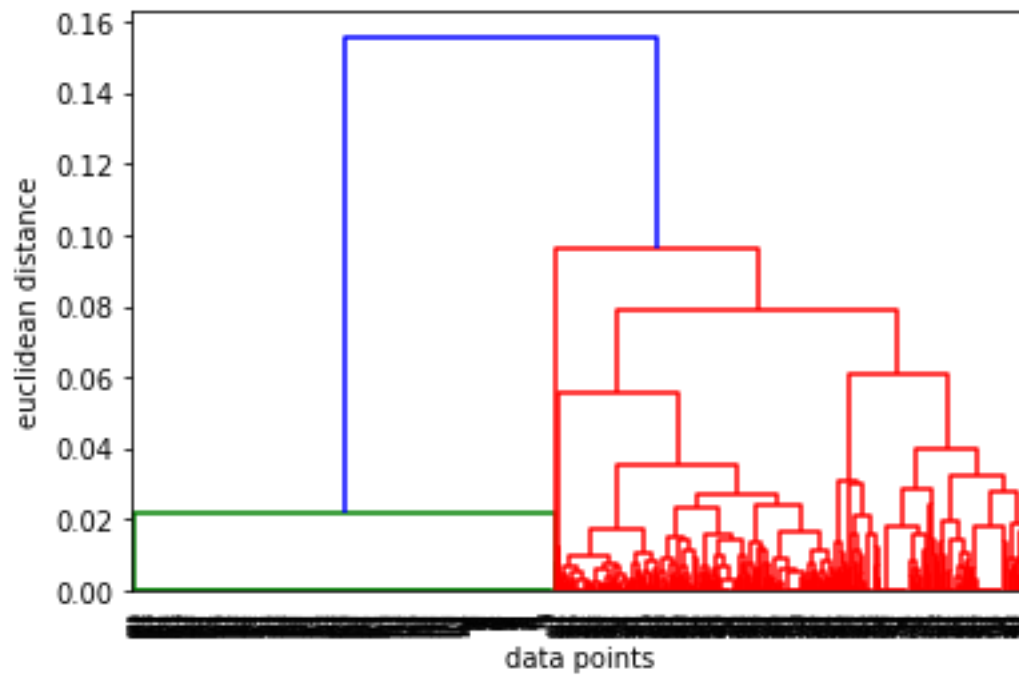
- Complete Linkage



- Centroid



- Average Linkage



- Ward Linkage

