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Find Me Out

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## Week - 4

What I learnt this week :-

### ☒ UNSUPERVISED LEARNING

- ☒ K Means Clustering
- ☒ elbow plot to find the best k
- ☒ WCSS
- ☒ Hierarchical clustering Technique
- ☒ Agglomerative Hierarchical clustering Technique
- ☒ Dendrogram
- ☒ MIN,MAX,Group Average,Distance Between Centroids,Ward's Method
- ☒ Limitations of Hierarchical clustering Technique
- ☒ Spectral Clustering
- ☒ Data Splits, Models & Cross-Validation

What I implemented this week:-

- Elbow Method to determine the appropriate number of clusters (k) for the given data points.
- k-means clustering algorithm from scratch
- Perform agglomerative clustering
- Plot the dendrogram showing the hierarchy and divide the points into 3,4, 5,6,7 clusters.
- Try out different methods such as - Ward's Method,Complete Linkage (also known as Maximum Linkage),Single Linkage (also known as Minimum Linkage)
- perform k-means clustering on the image with different values of k.

*Link to my Week 4 collab*

[https://colab.research.google.com/drive/1IW6-tZEFxSrhF2\\_4r3dXf\\_1HIFhhJtk7?usp=sharing](https://colab.research.google.com/drive/1IW6-tZEFxSrhF2_4r3dXf_1HIFhhJtk7?usp=sharing)