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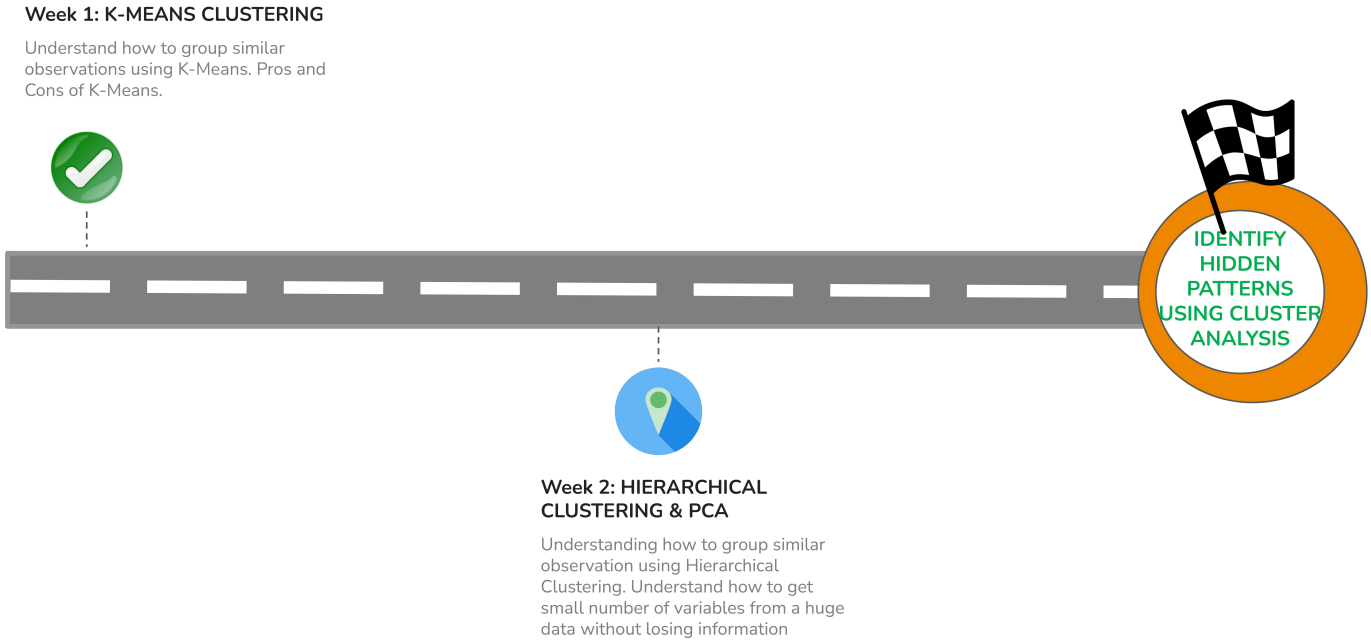
Course Content

Overview - Hierarchical Clustering and PCA



QUICK RECAP

In the previous week, we learned about finding an optimal number of clusters using K-Means by comparing different metrics like Silhouette Scores, Elbow plots, etc. Let us quickly recap what we have covered so far.

- Introduction to Clustering
- Types of Clustering
- K-means Clustering
- Importance of Scaling
- Silhouette Score and Visual Analysis of Clustering

COURSE OVERVIEW

Week	Module	Name of the topic
1	K Means Clustering	Introduction to Clustering Types of Clustering K-means Clustering Importance of Scaling Silhouette Score and Visual Analysis of Clustering
2	Hierarchical Clustering and PCA	Hierarchical Clustering Cophenetic Correlation Introduction to Dimensionality Reduction Principal Component Analysis

WEEK 2 OVERVIEW

This week, we will be learning about applying the Hierarchical clustering technique to group similar data points together and discover underlying patterns. Also, we will learn about simplifying the complexity of high-dimensional data while retaining trends and patterns by transforming the data into fewer dimensions using PCA Techniques. The following topics will be covered in this module:

- The concept and application of Hierarchical Clustering
- Determining the optimal number of clusters using Cophenetic Correlation
- Introduction to Dimensionality Reduction
- Understanding and application of Principal Component Analysis (PCA)

LEARNING INSTRUMENTS

Week	Module	No. of videos	Total duration	No. of Test Your Understanding Quizzes	No. of Weekly Graded Quizzes	No. of Practice Exercises
1	Hierarchical Clustering and PCA	7	~2 hours	7	1	2

Note: It is recommended to spend at least 1 hour/day along with practising datasets and quizzes.

Power Ahead!

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