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ok la	con alon dillan code - Assignment-2 us with it of a long of
	and and dillow control - Assignment - 2 and add add and and and
F. 17	masse filter armist as a course prompt
*	Title: consider a suitable data for clustering of data instances
	in different groups, apply different clustering techniques-
	Vicualize the clusters using witable tool.
	0 - 10
*	Objectives: - undexistand various ductering types and how to
	implement the same using suitable tool (bython) - using
	bython to cocate k-means clustering models and heisaschical
otte 1	clustering models. In this other formands
*	autromes: will be able to demastrate different clustering algorithms.
	student will be able to demostrate and visualize the
	effectiveness of t-means clustering and heirarchical
	clustering using graphical capabilities of bython.
	2 of an han handel. I at at avoid to go to a naval of
<del></del>	S/W and H/W Requirements L
	64-bit O.S., python 3.8, Jupytex Notebook, machine with 64-bit
	paxes « D
	of white agreement home worked by sind bands out front this
4×	Theory: K-Means clustering is a type of unsupervised learning.
- 5	which is used when you have unlabeled data. The goal of
1	this algorithm is to find groups in the data with the
9/1 (41) E	number of groups represented by the variable to the
ν.	algorium works Hexatively to assign each data boint to
	one of K-groups based on provided features.
war in the same	(i) controids of the k-clusters, which are used to label
	. 2 most in idata remais in minimum in minimum and deal
· [-	(ii) labels for training data.



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	To calculate the optimal no of clusters, which are worth to
	Max ellow method is used. A graph of within cluster sum of
1	squares (wiss) against no of clusters is plotted to find
113	aut elbour point.
· * -11	
	wess = $\frac{\xi}{\zeta_{K}} \left( \frac{\xi}{dictance} \left( \frac{di}{di}, (\kappa)^{2} \right) \right)$ .
	steps to implement k-means-
	Chanse the no of clusters k.
(i)	select K random points (centroids).
<u> </u>	Assign each data point to the closest centroid. This forms
	t clusters.
Ú	label the data points according to the clusters.
(7)	madel is ready.
*	Heirarchical clustering 1-
	Given a set of Nitons to be clustered and on NXN
	dictance matrix.
the not	Following are the steps for clustering.
0	start by assigning each item to its own cluster.
(ii)	find the closest paix of clusters and merge them into a
1. 15	single clustes.
	Compute the distances between the new cluster and each of
	the old clusters.
90	Repeat steps 2 63 until all items are clustered into a single
7.7.1.3	cluster.
	with the help of the distance matrix we are
	which displays heiraschical relationship among data items.
	ery aua nems.
Ber 19 15 1	

*		
- 4		(Saathi)
4-,	Date / /	Notebooks
*	Conclusion! Thus, we studied live on the duckering	technique c
*	conclusions. Thus, we studied different clustering and implemented them using bython.	
	implemented them using python.	),
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