

	POORNIMA	
	Experiment -3.	
•	Objective :- Implement K-means clustering	
	Algorithm for find the clusters on the ba	115_
	Algorithm for find the clusters on the bar of age - income dataset.	
	Codest	O SA
	*	m 1 / 1
	Import numbu as ND	11
	impart numpy as np	
		101
	df-income > pd. gread-csv ('income-csv')	
u zyada	df_income.head()	
		T The
	Proposit matplotlib. pyplot as plt.	
		'Man')
	plt. scatter (df-incomet Income(\$), 1, df-incomet	(Je)
	impart warnings	
	impart warnings ('ignare') warning. filterwarnings ('ignare')	
	from sklearn. clu fee impart KMeans	- Cax
an do	Rm 2 KMeansin Custon	1
	Rm 2 KMeans(h-Clusters = 0) y predicted-clusters = km. fit_predict (df_income (C) 1 Income (\$)'])	'Age'
	y preate tu-	
	1 Intometa	
	y predicted clusters. Page N	No
	y precedent	

E-toning !!

Mulling read Kingons clusterin for from the studens 160000 140000 . du ze Admin producti by us bond trendon 120000 off income a policy earlies (income csv 00000 Unincome head () 80000 as telepped diltalylam diegori 60000 plt. suction but income [Income 4000 37.5 40.0 42.5 32.5 35.0 27.5 Entrained . Filtering in the From seleana, clusies improte streen

Rin 2 Khleansler clustions 3)

1- Diengieled - chartens: 6m. 4.1 - Diengepfel jucque (C. Ja CILITI I mos of

if per lichect clusters.

	POORNIMA
	df. Pricome l'cluster'] = y-paredicted_clusters
	of Income. head ()
	plt. scatter (df_income ['Age'], df_income ['Income (\$)'], c=df_income ['(luster')], cmap = 'sainbow')
·	y-phedicted_clusters = km. fit-predict (df_income[[] 'Age', 'Incom(\$)']])
	df-income ['Cluster']= y puildicted - cluster
	plt.scanner (df_incomet 'Age'], df_income ('Income(\$)') c=df_incomet' (luster], cmap= 'sainbow').
	plt-xlabel ('Age') plt-ylabel ('Income in \$')
	cluster - centers = km. cluster - centers -
	pt. scatter (df. income ['Age'], df. income ('Income (a)') c = df.income ('Cluster'), cmap = 'rain bow')
	pH. scatter (cluster_centers [:, 0], cluster_centers [:, 1],
	pit. xlabel ('Age') pit. ylabel ('Age')
	Reserve = sange (1, 11) Sse > [] Page No.
	SSY > []

POORNIMA fort & in & stange: km = KMeans (h_clusters = k) km. fit publict (df_income (l'Age', 'Inceme (b)) Soe. cuppend (km. ineutla_)

plt. xlabel ('k')
plt. ylabel ('SSE')
plt. plot (k-vange = , sise)