Implementation of clustering Exp. nowswar 80 supplied Techniques LK-means Dale Aun noidable real and nourses a k means clustering 13-218-5 Brunique wing to Python language Explanation * Import u-means from sklearn duster x Assignment and gin translate arest x call the bundton k-leans? [89,00] AS J & Perborm scalber of pration and dirplay [185,300,94]. [186,400,95].[183,500,96] tugue [190,700,482, [141,800,993, [142,4800 grues 100,10] import numpy as no religion ! slam ! slam ! import pandas as poli short sloved! Brom malpholito import pupilet as PU from stolearn datasets import make blobs from sklearn cluster import in kineans x, y = make blobs (n= samples=300; centers=4, cluster = 0.0, random - state = 0) PR. Sigure (signing: L6,6)) acribated I have Plt. scatter(x[;,o], x[:,1]) output Plk. Kille ('Dala points') T'alan'T Pll. xlalel ('feauturei') Thomas ! Plk. xlabel ('fearture 2') Plt. Show() was =[] bor i in range (1,11). k means = kmeans (x-cluster=1, int=k-means +t', man liter=10, handom, skule=0 The year is more in month School of Singles Jone Postunary.

Pel . plot (sange(1,11), wess, marber= '0') Plk. title ('Elbow method') plt.ylabel('wcss') PUL. Show kmeans = kHeans (n_clusters = 4, init= 'k-means ++', mare iter=300, init=10, Standom=0) Pored.y = kmeans. Bit_ Predict(x) Plt. Ligure (Ligrige= (8,6)) Plt. Scallor(x[:, 0], x[:,1], C= Bred-y, emap= vieridis marker = 'o') ple title ('k means clustering') Plt. Xlabel ('Beauture 1') Pit. ylabel ('Feautiones') PUL legend() Pll. show () output stubi implement de menne dustrible de Bondan, werthink butter soldings my words in sacured successfully

kmeans. Lit (21)

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wess. append (umeans. inertia.)

knocous Rib (x) Elbow Method PUE. P PLL . - 219 J. JUG . 219 K-Meady + CXILIBERT LIVE ENDERNE N = B. Lare pck. signal(signisc=(8,6)) Pet Scalbod x [. n.] 1- Parady : visualis X Centroids ('0' = Reskern 229 W9 SU9 印度 929 Result

Thus implement la-means clustering technique wing python language is implemented and executed successfully.