Experi mont -11

Implementation of Clust eving Techniques K-Means

ALM

To implement a k- rooms Oust vering te dringue using python longuage.

PROGRAM

import na varper numpy as up import pandas as pd from matplot lib import pyplal as plt from skelearn. datasets. samples. generated import mak-blobs

from she learn. Duster import the aus

X, y = make - bloks (n - samples = 300, centers = le, cluster - std = 0.60, random - state = 0) plt. scatter (x(:, 0], x(:, 1])

was = []

for i in sange (1,11):

lemeans = kmans (n. clusters = i, mit = 1/k-mans ++', man-it ex = 300,

h_init =10, rondon - state =0)

K means a. fit (x)

was append (le means. inertia -)

plt. plat (range (1,11), wess)

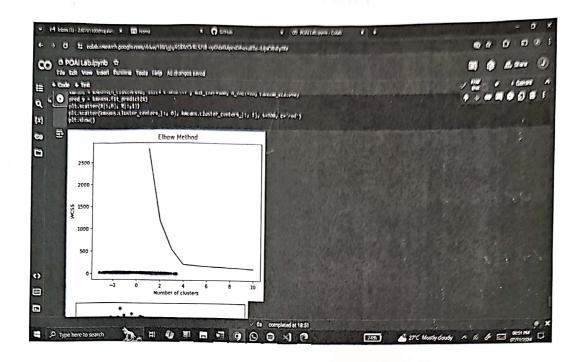
plt. title ('telly on nethod')

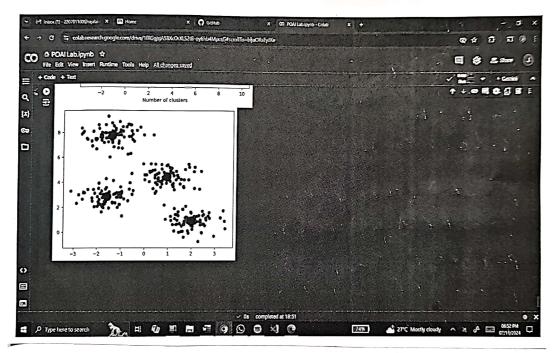
plt-alabel (Mumbel of clusters 1)

pet. yould ("WCSS")

pet. show Co

Kineans = K Means (n - clusters = le, init = k - means man - ital = 300, n-init =10, random state =0) pred - y = kemens a. fit- predict (x) plt-scatter (x[:,0],x[1,1]) plt. scatter (korreans. cluster - contres - (1,0) Kemeans. Cluster - centers - [1, 1], 5=30 C= Jeal 1) plt- show Cs E in a Salmeter Everyles (instance of a o 60, 50 day - 40 to =0) put. scattis (11: 67 x (1) x (1) : ~ sange (1,11): companie - Kromes (is charaists indo 1/2-1-com ++1, man it as = 300 mg 1 - init = 10, & rendon - State =0) 10 neams a fit (x) We as append (le manio. insteis -) ple. plat (sange (1,11), wess). ple. 1. +le C. Este on method per subself Hunter of auton per, filme (WCS2) , cet . . Les ()





RESULT

Thus, the program for the means dust ering becknique is successfully executed and the output is verified.