

K-MEANS

Objective: This assignment has two objectives:

1. Understanding how to implement the K-Means clustering algorithm for a real dataset.
2. Develop a pipeline to solve the problem and provide accurate output using basic programming logic.

Problem: Write a Python program using the provided template to find the best K in the KMeans algorithm using the Silhouette Coefficient metric for the 'housing.csv' dataset. The program should accept two integers that define the range of K values and output only the best K and nothing else.

Instructions: Download the template program and write your code in the designated location mentioned in the comments. Initialize the K-Means model: You must use `n_init='auto'` and `random_state=0` as KMeans model parameters. Use the given dataset (housing.csv) and calculate the Silhouette Coefficient for the range of K provided. Output the best K with respect to the Silhouette Coefficient.

You should read the skeleton code to understand the exact mechanism of input from the command line and provide the required output.

Execution Syntax: `python assignment.py <number> <number>`

Sample Test Cases:

Input	2 4	3 7	13 17	21 25	7 10
Output	2	3	14	24	8