

Assignment 6

Date-7th Feb 2025
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AI LAB

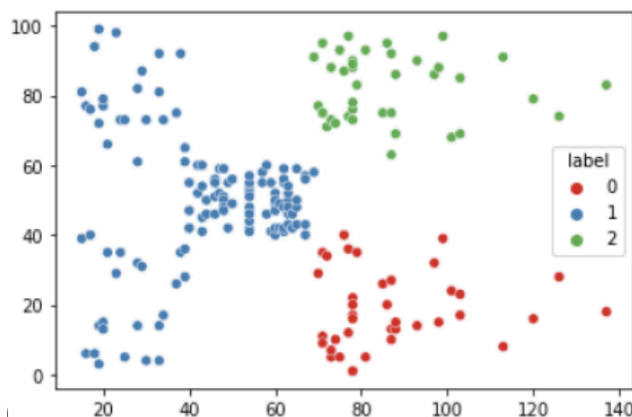
K-means Clustering

In this assignment, you need to implement the K-means clustering algorithm on the following dataset.

https://drive.google.com/file/d/1xHNXEdnyEcXMqlk4lA1JqVjKFr3sdV2Q/view?usp=drive_link

What to Submit?

1. You need to submit a single PDF report file and the name of that file should be your roll numbers.
2. You need to run the k-means algorithm on the dataset for $k=2$, $k=3$.
3. In your report, you should have 2 plots - one for $k = 2$ and the other for $k = 3$. In the plot, you need to plot the given dataset and use different colors to show points belonging to a particular cluster. Example,



Note

1. Your code should be in Python.
2. You are not allowed to use libraries like sci-kit learn, Tensorflow, Pytorch, etc, and use their built-in linear regression models.
3. You may use libraries like numpy, pandas, matplotlib, etc to read and manipulate the dataset and plot the graphs.
4. Your plots should be labeled properly.
5. Normalize your predictor before starting training the model.

