

## Minor Project 3 – Cognitive Application

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### Clustering Implementation

K-Means clustering is a method of vector quantization, originally from signal processing, that aims to partition  $n$  observations into  $k$  clusters in which each observation belongs to the cluster with the nearest mean, serving as a prototype of the cluster.

Implement K-Means Clustering Algorithm over the dataset given below. Make sure you also plot the scatter chart for the same.

**Dataset:** [https://docs.google.com/spreadsheets/d/16ulbDGfyTZ6XUk7ScCcU28ueEj\\_FrwI8/edit#gid=97762001](https://docs.google.com/spreadsheets/d/16ulbDGfyTZ6XUk7ScCcU28ueEj_FrwI8/edit#gid=97762001)

**Reference:** <https://towardsdatascience.com/understanding-k-means-clustering-in-machine-learning-6a6e67336aa1>

I have implemented the **Clustering** algorithm over the given dataset, and I have run it in Jupyter notebook. The “.ipynb” file and the dataset along with the graph shown is implemented and the same is uploaded on my GitHub repository, the link to which is given below.

**GitHub Repository:** <https://github.com/aiqqia/Machine-Learning>