DBSCAN

# library link

<https://github.com/scikit-learn/scikit-learn/blob/7e1e6d09b/sklearn/cluster/_dbscan.py#L164>

# basic description

DBSCAN(Density-Based Spatial clustering of applications with noise) is a representative density clustering technique. Unlike K-means, a representative alogrithm that clusters using the distance between clusters is a method of combining areas where points are gathered.

# version

* Numpy == 1.19.4 (pip install numpy)
* Matplotlib == 3.1.3 (pip install matplotlib)
* Pandas == 1.0.1 (pip install pandas)
* Sklearn == 0.22.1 (pip install sklearn)

# dataset

* Shopping mall customer data set (information on customer income and spending score)

<https://github.com/Daniel695/datasets>

# code description

* After downloading the shopping mall customer data set from the link above, the data set is placed in the same space as the code file.
* Code to cluster through DBSCAN using the income and spending of a given customer dataset.

# validation

* x