



UNIVERSIDADE
CATÓLICA
PORTUGUESA

BRAGA

Machine Learning

Session 5 - PL

Unsupervised Learning - Clustering

Degree in Applied Data Science

2024/2025

Clustering in Python (scikit-learn + scipy)

- <https://scikit-learn.org/stable/modules/clustering.html>
- In scikit-learn clustering methods follow the fit-predict methods:
 - "fit" compute the clusters;
 - "predict" predicts the cluster of the samples;
- <https://docs.scipy.org/doc/scipy/reference/cluster.html>

Clustering in Python (scikit-learn + scipy)

- Scikit-learn:
 - K-means:
 - <https://scikit-learn.org/stable/modules/generated/sklearn.cluster.KMeans.html>
 - Hierarchical:
 - <https://scikit-learn.org/stable/modules/generated/sklearn.cluster.AgglomerativeClustering.html>
- Scipy:
 - K-means:
 - <https://docs.scipy.org/doc/scipy/reference/generated/scipy.cluster.vq.kmeans.html>
 - Hierarchical:
 - <https://docs.scipy.org/doc/scipy/reference/generated/scipy.cluster.hierarchy.linkage.html>

Exercises:

- Notebooks on the github repository:
 - Notebook with examples:
 - `exercises/session05/examples.ipynb`
 - Notebook with exercises:
 - `exercises/session05/exercises.ipynb`