

# Machine Learning

## Laboratory on unsupervised learning

Samuele Bortolotti   Steve Azzolin

University of Trento

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# Set-up on Google Colab

Open the file on Google Colaboratory:



Figure 1: QR code to open Colab

# Take-Home Assessment

Apply unsupervised learning techniques to explore, cluster, and interpret a dataset of your choice.

Steps:

- 1 Choose an unsupervised dataset.
- 2 Apply clustering algorithms: K-Means and Gaussian Mixture Models.
- 3 Determine the optimal number of clusters using the Silhouette Score and Elbow Method.
- 4 Compare clustering methods and **explore other methods** in scikit-learn.

# Suggested Datasets

- 1 Iris Dataset
- 2 Mall Customers Dataset