

# Machine Learning

## Module 8.0 - Unsupervised Learning: introduction

Arnold Vialfont

Master in Management, Business Analytics, HEC UNIL

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# Supervised vs unsupervised learning

**Supervised learning** aims to predict an outcome  $y$  from features  $x$ . The quality of the model can be inspected by comparing the predictions to the true outcomes.

**Unsupervised learning** aims to analyze the link between the features. There is no “supervisor”. Unsupervised methods can be separated in two main ones:

- **Clustering**: group instances according to their similarities across the features.
- **Dimension reduction**: link the features according to their similarities across the instances, find commonalities, and combine the features in fewer dimensions.