

Introduction:

- Data representation:
 - How we represent data is linked to what information we are able to retrieve from it.
 - Examples:
 - Records:
 - **m**-dimensional points / vectors
 - Example: (name, age, balance) -> ("John", 20, 100)
 - Graphs: nodes connected by edges
 - Images: pixels
 - Text: list of words
 - Strings: list of characters
 - Time Series
- Types of learning:
 - Supervised Learning
 - Temperature vs Cricket Chirps
 - Regression problem
 - Tumor Size vs Age
 - Classification Problem
 - Unsupervised Learning:
 - Goal: find interesting structure in the data
 - Clustering problem
 - Dataset: collection of articles
 - Are these articles covering the same topics?