Recap

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Reusing this material

Partners

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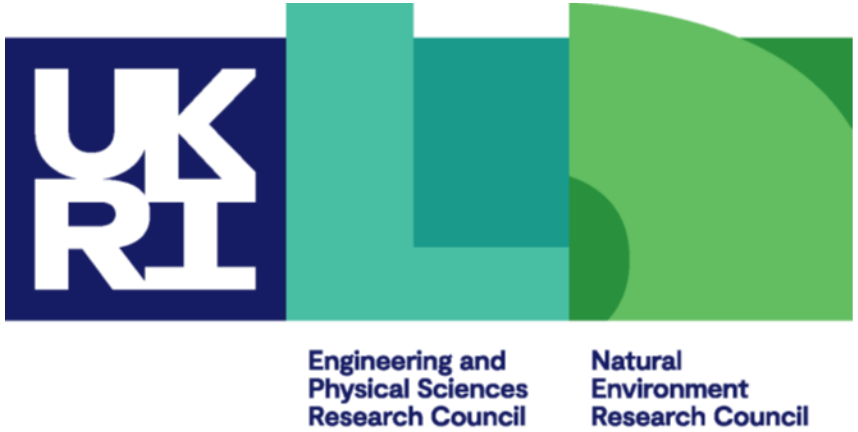

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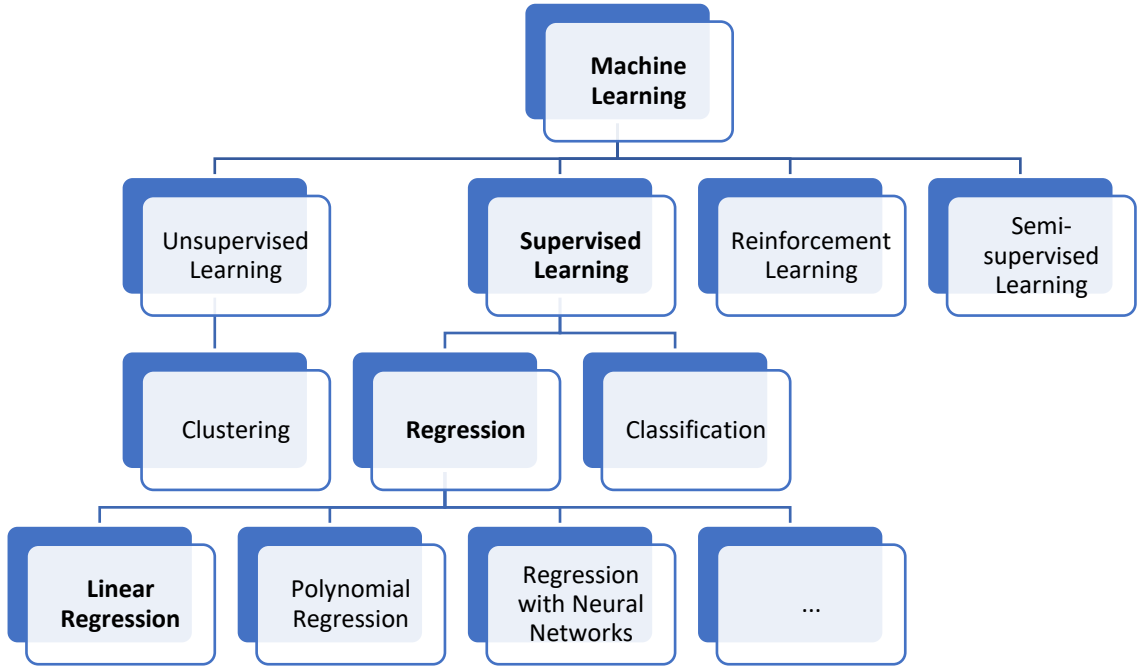
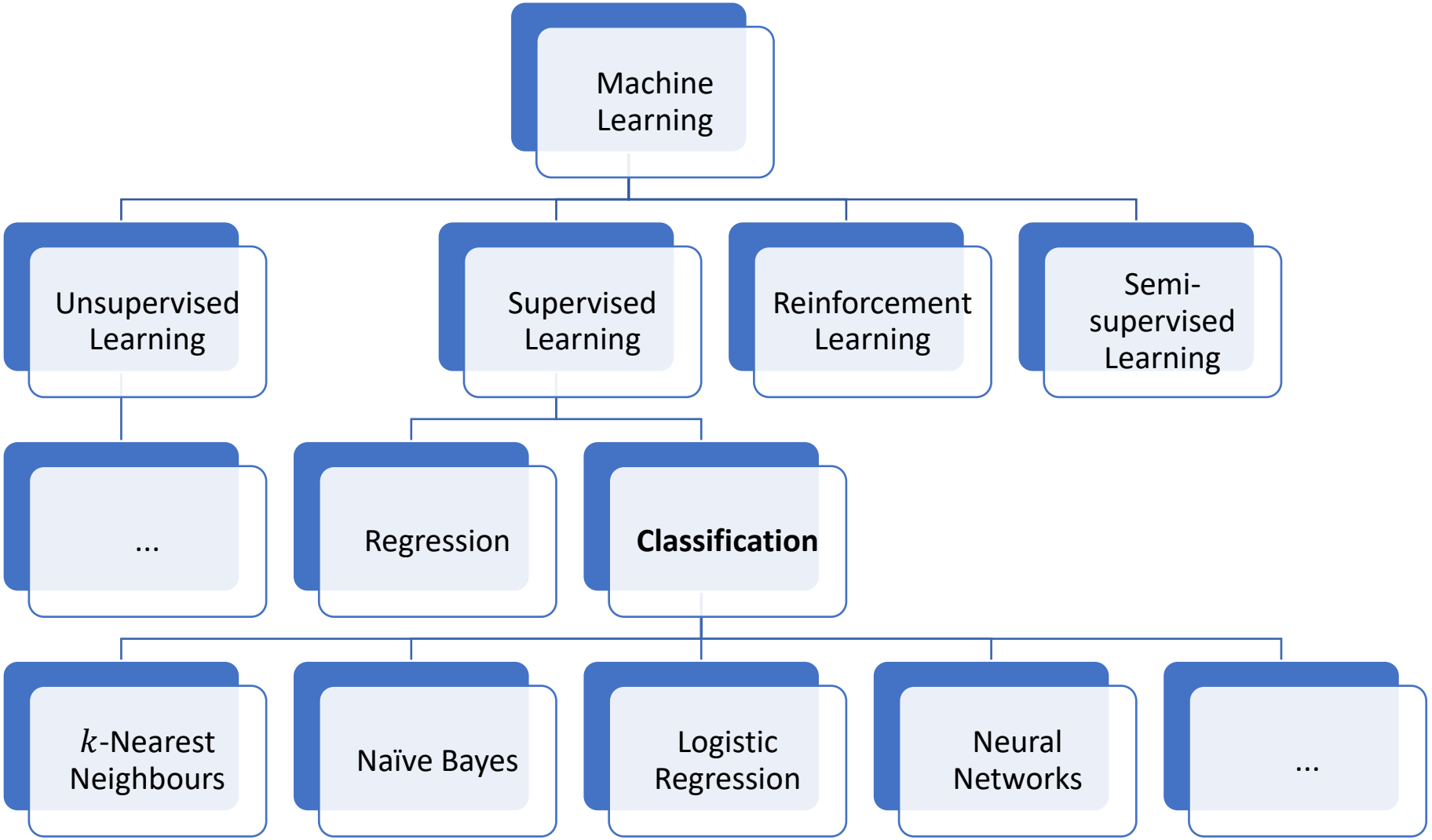
Linear Regression

- Linear Regression predicts a continuous variable from one or more variables
- One of the simplest predictive models
- Existing data is used to create a **linear model**




Machine Learning
Unsupervised Learning
Supervised Learning
Reinforcement Learning
Semi-supervised Learning
...
Regression
Classification
k-Nearest Neighbours
Naïve Bayes
Logistic Regression
Neural Networks
...

Classification: problem overview

- Input is one or more features
  - numerical or categorical
- Output is a category (or class)

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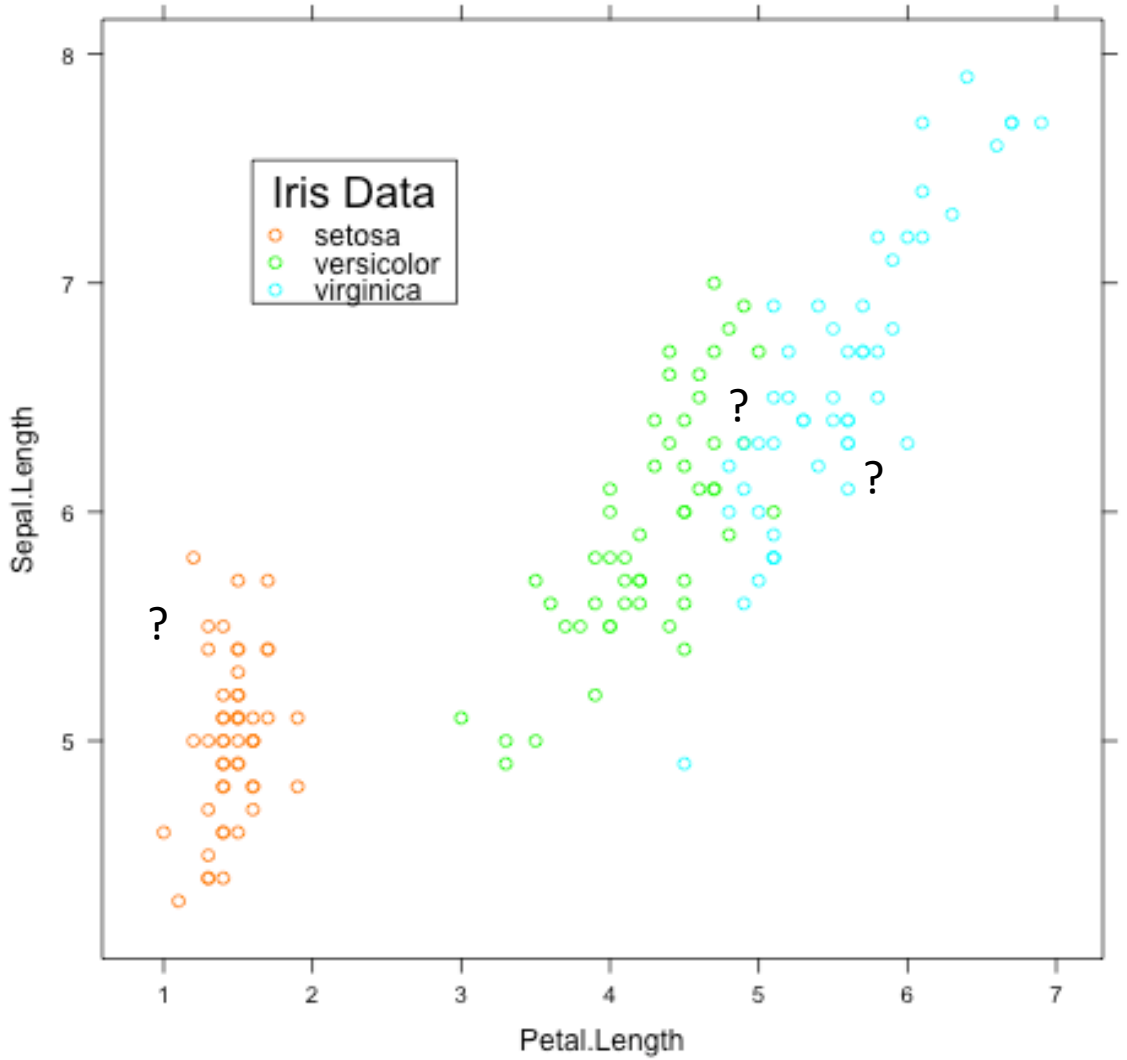
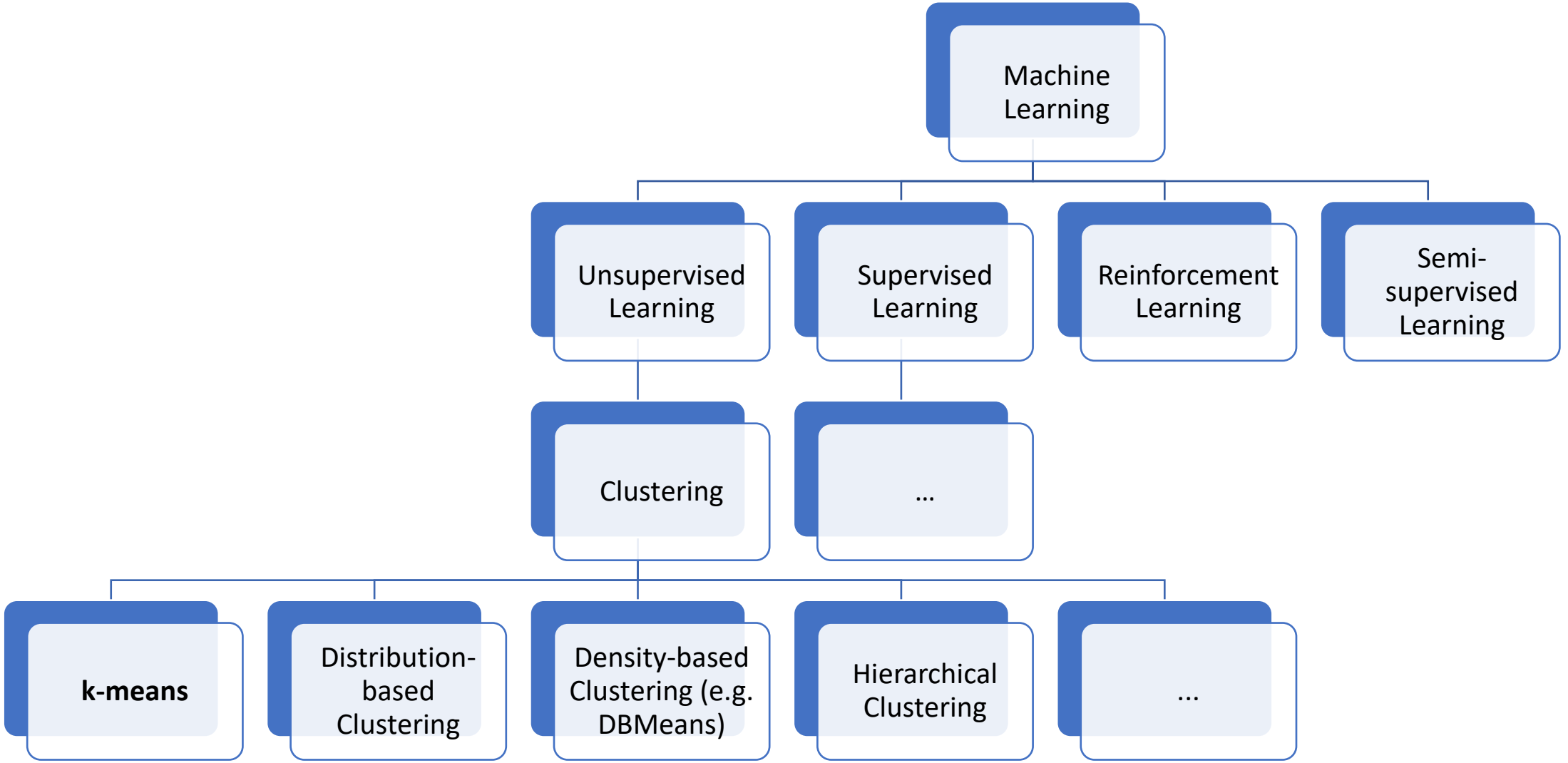
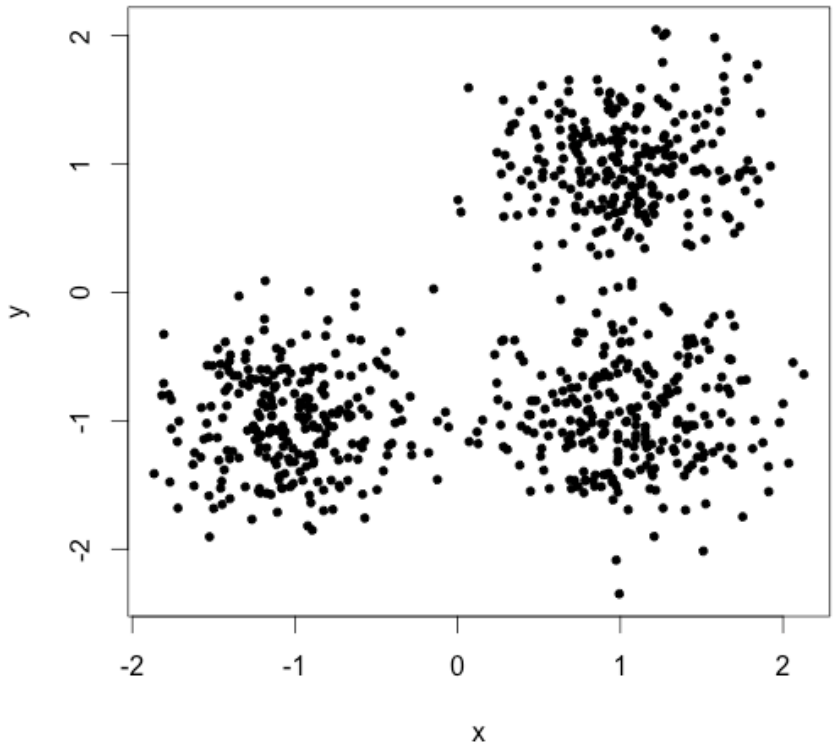
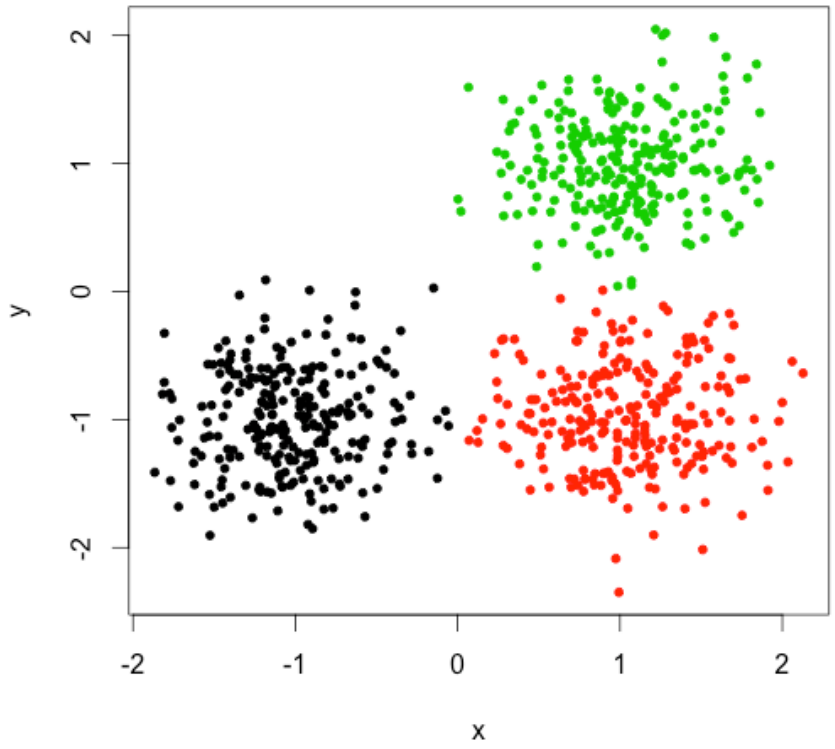



Machine Learning
Unsupervised Learning
Supervised Learning
Reinforcement Learning
Semi-supervised Learning
Clustering
...
k-means
Distribution-based Clustering
Density-based Clustering (e.g. DBMeans)
Hierarchical Clustering
...

Clustering – the problem





Data science and machine learning

- Lots more to data science than model building
  - Data collection, cleaning, analysis, visualisation, etc…
- Model choice and training/building requires understanding your probably
  - Might be simple approaches that work well
  - With complex problems or large datasets machine learning approaches can be useful