Week 1 - Day 1: In-class Exercise

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Explain the difference between Supervised and Unsupervised Machine Learning with examples. Submit your answers individually in a word document here.

R: The main difference between supervised and unsupervised Machine Learning is that supervised uses labels and unsupervised does not. Furthermore, they perform different tasks, while the first one is used for Classification and Regression tasks, the second is used for clustering, Association and Dimensionality Reduction.

One example of Supervised ML is an algorithm that distinguishes dogs and cats. The training is done using a dataset that brings lots of pictures of both animals with their respective labels and then the algorithm finds the common features that distinguish each other.

A common example of Unsupervised Learning is the clustering of customers into groups using only basic data such as age, gender, profession and purchase amount. The algorithm identifies patterns and groups customers who share similar characteristics, even though no labels were provided beforehand.