**Week 1 Assignment**

**What is Machine Learning?**

Machine Learning is a **branch** of **artificial intelligence** that focuses on building systems that can learn from **data** and **improve** over time.

**What is Supervised Machine Learning?**

Supervised Machine Learning is a type of machine learning where the model is trained using a **labeled dataset**.

**What is Regression and Classification?**

**Regression** is used when the output we want to predict is a **continuous value**. For example, predicting the price of a house based on its features (like area, location, number of rooms) is a regression problem.

**Classification** is used when the output is a **category or class label**. For example, predicting whether an email is "spam" or "not spam", or identifying the species of a flower based on its measurements, are classification problems.