**Understanding what Machine Learning**

**Types of Machine Learning: Supervised, Unsupervised, Reinforcement Learning.**

**Basic terminology: datasets, features, labels, training, testing.**

**Python basics: data types, control structures, functions.**

**Introduction to NumPy and Pandas for data manipulation.**

Exercise: Load a simple dataset (e.g., the Iris dataset from Scikit-Learn) and print the first 5 rows.

Exercise: Implement a function that takes a dataset and returns the number of features and samples.

Exercise: Split a dataset into training and testing sets with an 80/20 split.

Exercise: Explore the basic statistics of a dataset, such as mean, median, and standard deviation for each feature.

Exercise: Visualize the distribution of one of the features in the dataset using a histogram.

Exercise: Write a Python script to create a list of 10 numbers and compute their mean.

Exercise: Create a function that takes a list of numbers and returns a dictionary with the count, mean, median, and standard deviation.

Exercise: Generate a 5x5 matrix of random numbers and print it.

Exercise: Load a CSV file into a Pandas DataFrame and print summary statistics for each column.

Exercise: Implement a simple linear regression model using Scikit-Learn and print the model coefficients