**Week 2: Fundamentals and ML Specific Concepts**

**Assignment 1: Exploring Data with Pandas and Seaborn**

Task:

* Load a dataset using Pandas.
* Explore the dataset (e.g., check for missing values, data types, summary statistics).
* Visualize some important features using Seaborn.

**Assignment 2: Implementing Logistic Regression**

Task:

* Load a dataset suitable for classification.
* Split the dataset into training and testing sets using train\_test\_split.
* Train a Logistic Regression model on the training data.
* Evaluate the model using accuracy and F1-score.

**Assignment 3: NLP Task with NLTK**

Task:

* Preprocess a text dataset using NLTK.
* Perform stemming and lemmatization.
* Tokenize the text using regexp tokenizer.

**Assignment 4: Text Classification with SVM and TF-IDF (Do it in Week 3 )**

Task:

* Load a text classification dataset.
* Preprocess the text data using TF-IDF vectorization.
* Split the dataset into training and testing sets using train\_test\_split.
* Train a Support Vector Machine (SVM) model on the TF-IDF transformed data.
* Evaluate the model using accuracy and F1-score.