

# Simple Multi-Layer Perceptron (MLP) for Predictive Tasks

## Description

This notebook demonstrates the implementation of a simple Multi-Layer Perceptron (MLP) model for solving a predictive task. It includes data preparation, model architecture design, training, evaluation, and result interpretation.

## Structure

The notebook contains:

- **17 code cells:** Includes the implementation of key functionalities such as data loading, preprocessing, model training, and evaluation.
- **10 markdown cells:** Provides explanations, instructions, and context for each step of the process.

## Key Features

- **Data Preparation:** Step-by-step preprocessing of the dataset.
- **MLP Architecture:** Implementation of a neural network using a widely-used framework.
- **Model Evaluation:** Metrics and visualizations to evaluate model performance.

## How to Use

1. **Prerequisites:**
  - Python environment with required libraries (e.g., PyTorch, or relevant libraries used in the code).
  - A dataset for training and evaluation (specific instructions included in the notebook).
2. **Steps:**
  - Open the notebook in Jupyter or a similar environment.
  - Follow the cells in sequence for a guided walkthrough of the implementation.
3. **Customization:**
  - Modify hyperparameters or the model architecture to suit your specific dataset or task.

## Results

- Demonstrates the accuracy and loss curves for training and testing.
- Highlights the effectiveness of the MLP model in predictive tasks.