

# Predicting Marks Based on Study Hours


This is a simple **Machine Learning mini-project** that predicts student marks based on the number of hours they studied. It uses **Linear Regression** from the scikit-learn library and is built using **Python**, pandas, numpy, and matplotlib.

## Dataset Used(from Kaggle)

The dataset is a simple CSV file with two columns:

- **Hours:** Number of hours a student studied
- **Scores:** Marks obtained

## Tools and Libraries

- Python 
- pandas
- numpy
- matplotlib
- scikit-learn

## Steps Performed

1. **Load the Dataset** using pandas
2. **Split the Dataset** into training and test sets
3. **Train** a Linear Regression model
4. **Predict** student marks on the test data
5. **Evaluate** the model using Mean Squared Error and  $R^2$  Score
6. **Visualize** the regression line

## Project Goals

- Learn basic model training
- Understand regression concepts
- Practice real-world ML project flow
- Use GoogleColab and GitHub