***Superior University***

**PAI Lab task 01**

Submitted by:

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Roll No:

**SU92-BSAIM-F23-004**

Program:

**Artificial Intelligence**

Submitted to:

**Sir Rasikh**

**Title:**

**“Price Prediction”**

**Introduction**

This project is about predicting prices using machine learning. The dataset contains past price records, which are analyzed to train a model that can estimate future prices. The main goal is to build an accurate model that provides reliable price predictions based on different factors.

**Files:**

**\*train.csv** – The main dataset used for training the model, containing various features and actual prices.

**\*test.csv** – The dataset used to test the model’s predictions.

**\*submission.csv** – The final predicted prices generated by the model.

**\*data\_description.txt** – A text file explaining what each column in the dataset represents.

**\*Assignment no 1 price\_prediction.ipynb** – A Jupyter Notebook with step-by-step implementation of the price prediction model.

**\*main.ipynb** – Another notebook, possibly containing the final version of the model or a different approach.

**\*Score Price Prediction.PNG** – An image showing the model’s performance score.

**How the Project Works**

**Step 1: Data Preparation**

**1.**Load the training dataset.

**2.**Check for missing or incorrect values and fix them.

**3.**Choose important features that affect price prediction.

**Step 2: Model Training**

**1.**Train different machine learning models.

**2.**Test their performance and select the best one.

**3.**Fine-tune the model to improve accuracy.

**Step 3: Making Predictions**

**1.**Use the best model to predict prices for the test dataset.

**2.**Save the predicted prices in **submission.csv** for evaluation.

**Results**

* The model achieved a **score of 59382.43527** based on its predictions.
* There is room for improvement by testing different algorithms, improving data quality, or fine-tuning parameters.

