Azure ML Classic Studio

Predicting Automobile prices using Regression Model in Classic Studio.

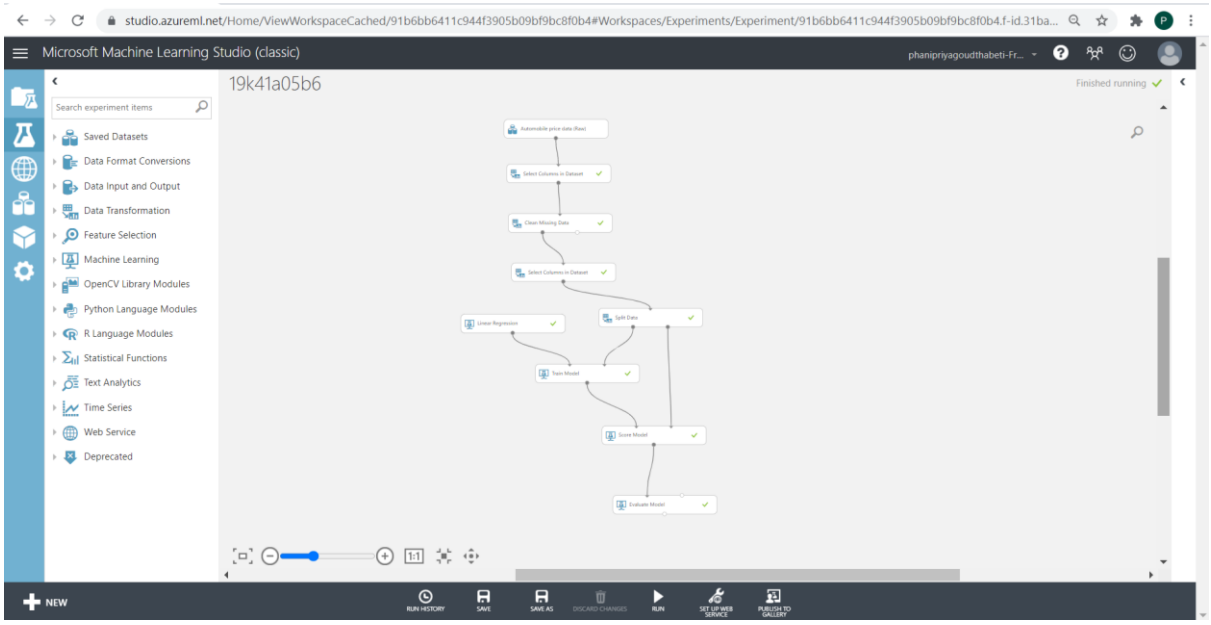
This model (Pipeline) trains a linear regression to predict a car's price based on technical features such as make, model, horsepower, and size. Because you're trying to answer the question "How much?" this is called a regression problem.

However, you can apply the same fundamental steps in this example to tackle any type of machine learning problem whether it be regression, classification, clustering, and so on.

Machine Learning Project Workflow

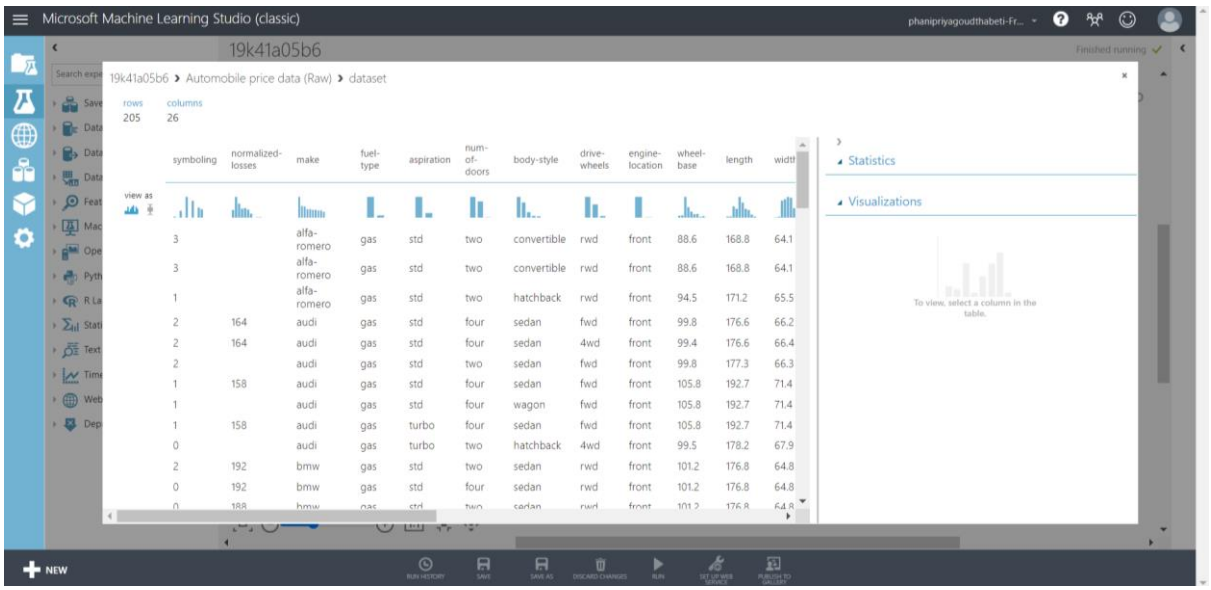
1. **Import Data**
2. **Explore Data (Missing values, outliers)**
3. **Preprocess data (Missing value imputation, outlier treatment, normalization)**
4. **Model Selection**
5. **Model Training**
6. **Model Testing**
7. **Model Deployment**

Workflow



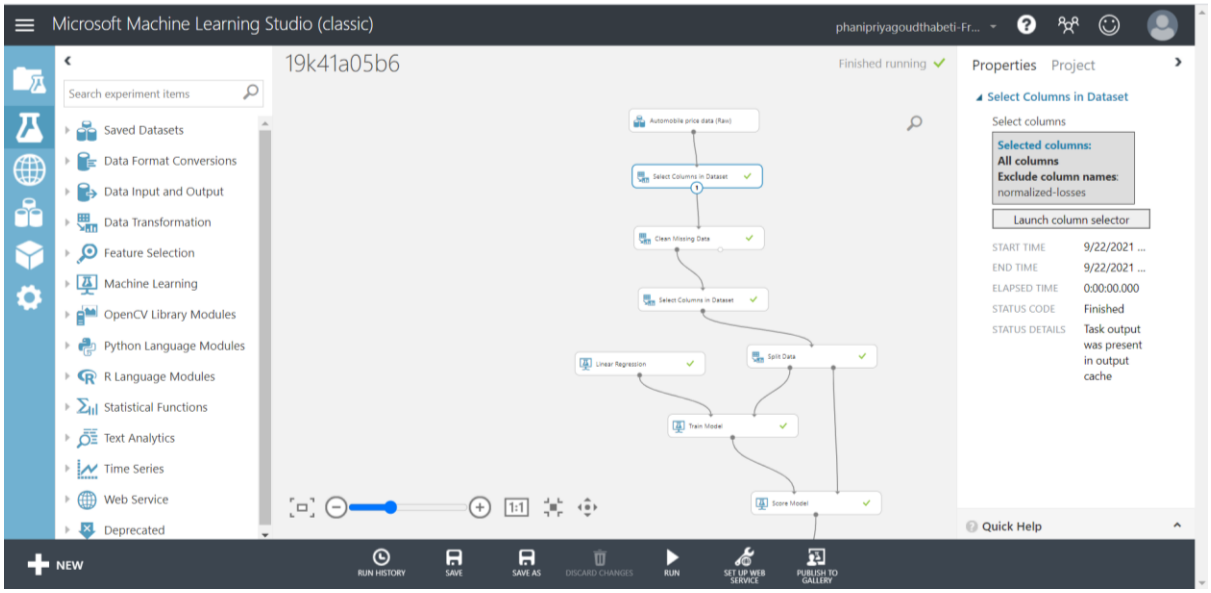
IMPORT DATA:

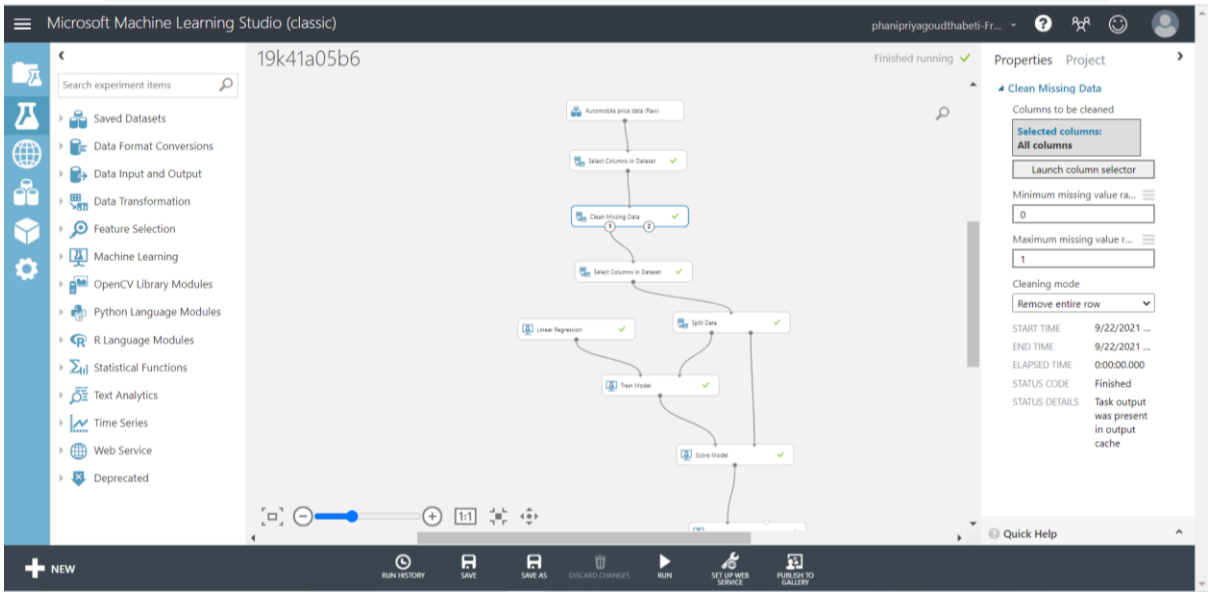
- Importing the RAW dataset which is in CSV format.
- The dataset is pre-available in the Azure ML Classic Studio.



Explore Data

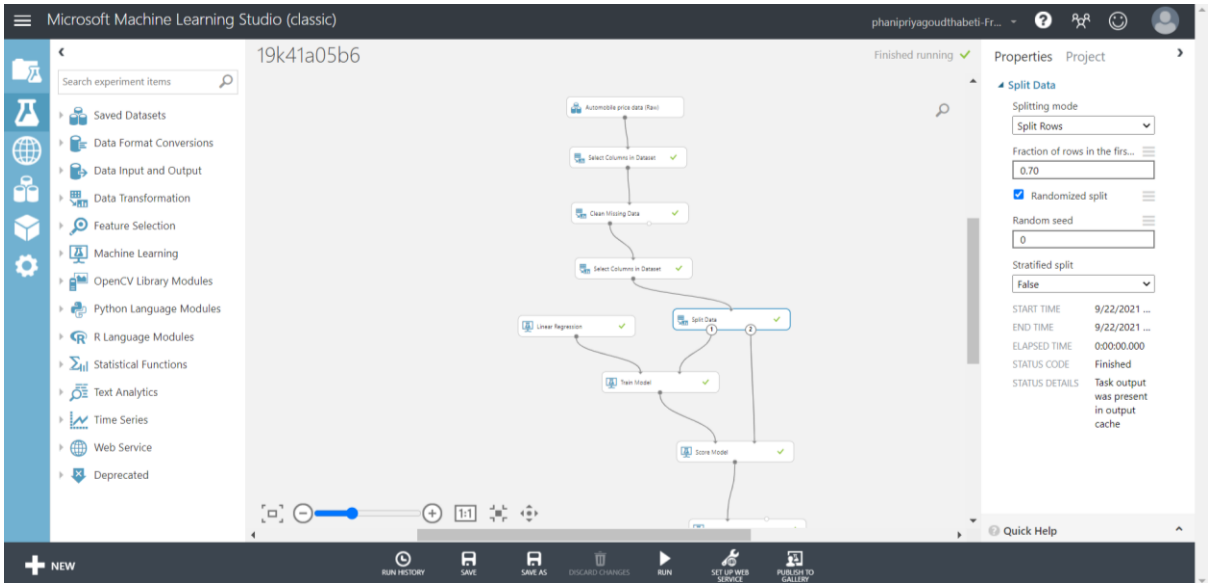
- this basically includes data visualization to search for any missing values in the Dataset if any missing values are found ,then they need to be cleaned.
- Selecting the required columns and clean the data using the clean missing values module(just Drag &Drop)



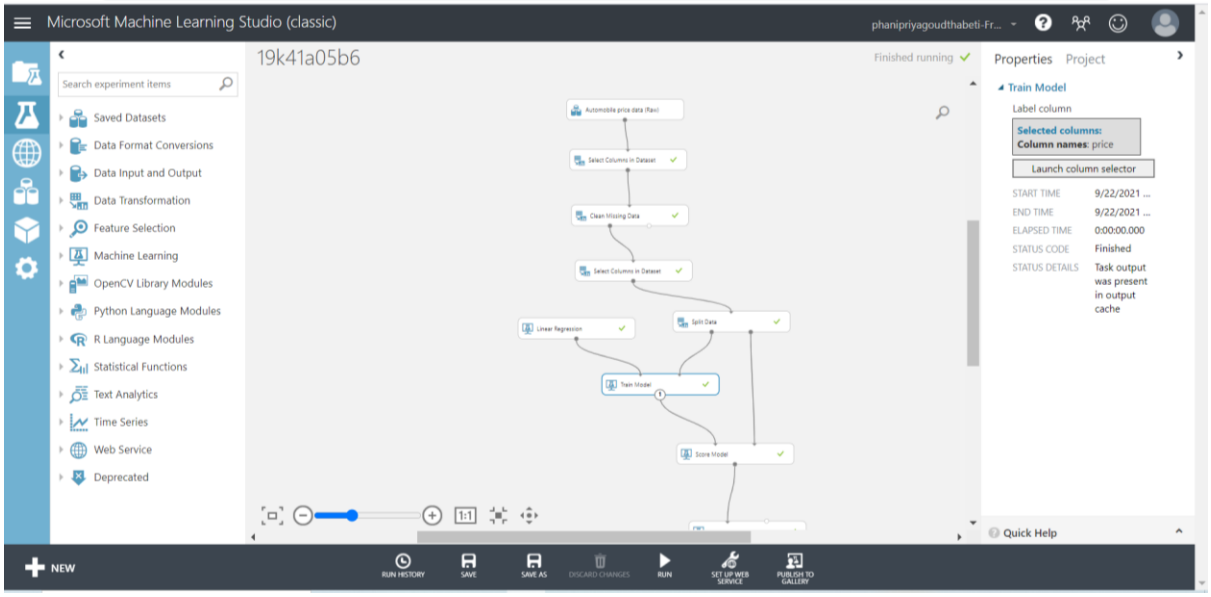


Split Data

- Use the Split Data module to randomly divide the input data so that the training dataset contains 70% of the original data and the testing dataset contains 30% of the original data.

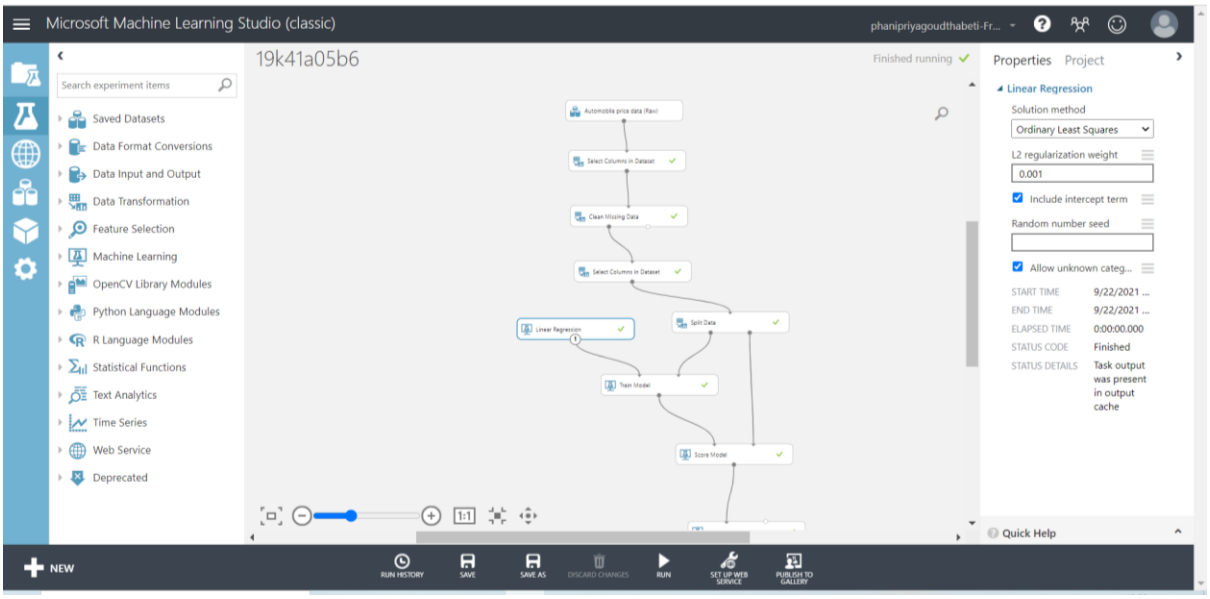


Model Training and Algorithm



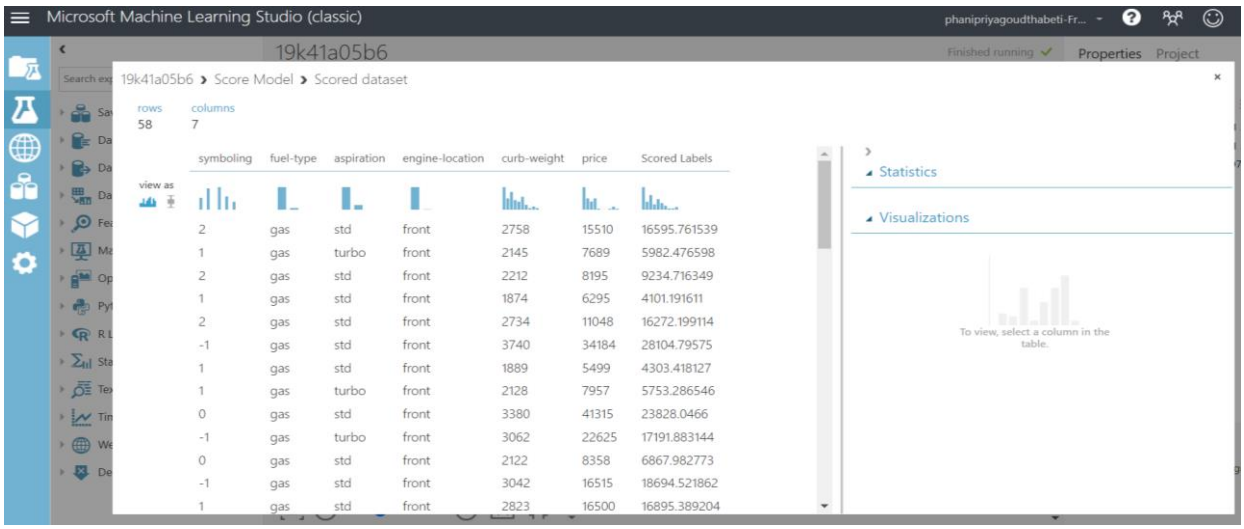
using Linear regression to train the model

- Since the goal of this sample is to predict automobile prices, and because the label column (price) is continuous data, a regression model can be a good choice .we use linear Regression for this pipeline.



Score Model and Evaluate Model

- After the model is trained ,we can use the score model and evaluate model modules to generate predicted results and evaluate the models.



Evaluation Results