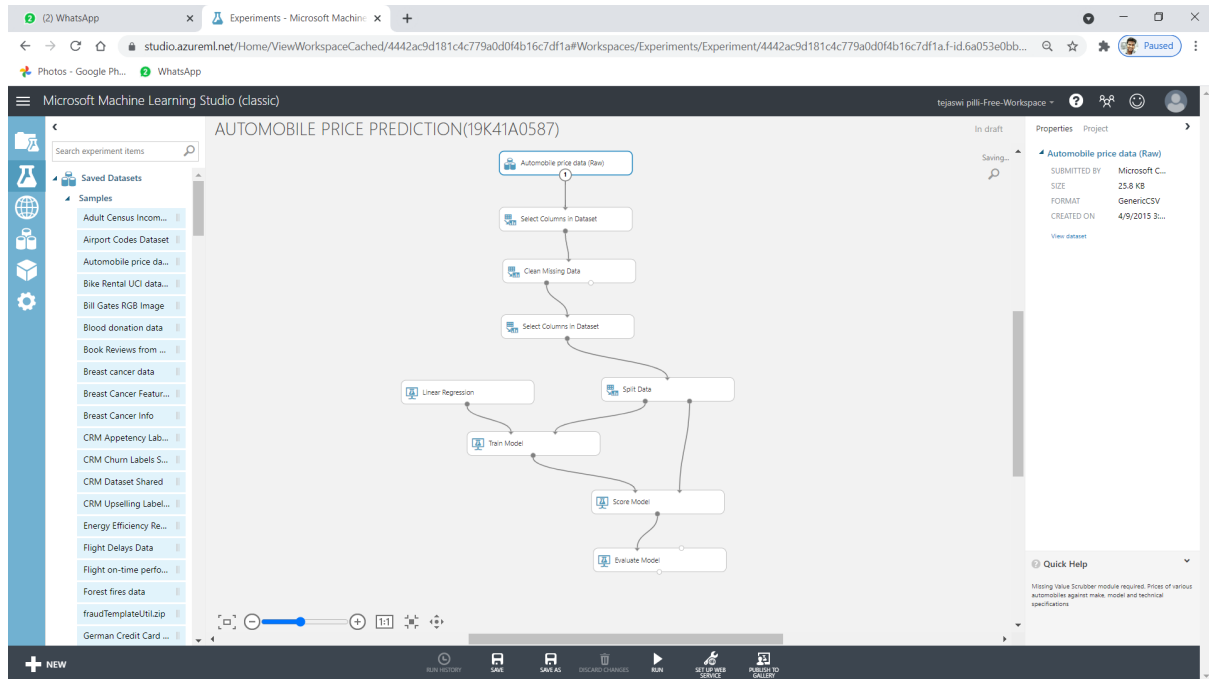


AI ASSIGNMENT (19K41A0587)

MACHINE LEARNING PROJECT WORKFLOW:-

WORKFLOW:-



EXPLORE DATA:-

Microsoft Machine Learning Studio (classic)

AUTOMOBILE PRICE PREDICTION(19K41A0587)

Workflow diagram showing the process:

- Automobile price data (Raw)
- Select Columns in Dataset
- Clean Missing Data
- Select Columns in Dataset
- Split Data
- Linear Regression
- Train Model
- Score Model
- Evaluate Model

Properties Panel: Select Columns in Dataset

Select columns:

- Selected columns: All columns
- Exclude column names: normalized-losses

Launch column selector

START TIME: 9/22/2021 ...

END TIME: 9/22/2021 ...

ELAPSED TIME: 0:00:01.472

STATUS CODE: NotStarted

STATUS DETAILS: None

Quick Help

Selects columns to include or exclude from a dataset in an operation. Formerly known as Project Columns. (show help...)

Microsoft Machine Learning Studio (classic)

AUTOMOBILE PRICE PREDICTION(19K41A0587)

Workflow diagram showing the process:

- Automobile price data (Raw)
- Select Columns in Dataset
- Evaluate Model

Select columns dialog box:

BY NAME

WITH RULES

Allow duplicates and preserve column order in selection

Begin With

ALL COLUMNS NO COLUMNS

Exclude column names normalized-losses

Microsoft Machine Learning Studio (classic) - AUTOMOBILE PRICE PREDICTION(19K41A0587)

Workflow steps:

- Automobile price data (Raw)
- Select Columns in Dataset
- Clean Missing Data
- Select Columns in Dataset
- Linear Regression
- Split Data
- Train Model
- Score Model
- Evaluate Model

Properties Panel - Clean Missing Data:

- Column to be cleaned: All columns
- Minimum missing value ratio: 0
- Maximum missing value ratio: 1
- Clearing mode: Custom substitution value
- Replacement value: 0
- Generate missing value indic.: ☐
- START TIME: 9/22/2021 ...
- END TIME: 9/22/2021 ...
- ELAPSED TIME: 0:00:01.672
- STATUS CODE: NotStarted
- STATUS DETAILS: None

Microsoft Machine Learning Studio (classic) - AUTOMOBILE PRICE PREDICTION(19K41A0587)

Workflow steps:

- Automobile price data (Raw)
- Select Columns in Dataset
- Evaluate Model

Select columns dialog box:

- BY NAME
- WITH RULES
- Allow duplicates and preserve column order in selection: ☐
- Begin With: All columns, NO COLUMNS

Microsoft Machine Learning Studio (classic) - AUTOMOBILE PRICE PREDICTION(19K41A0587)

Workflow steps:

- Automobile price data (Raw)
- Select Columns in Dataset
- Clean Missing Data
- Select Columns in Dataset
- Split Data
- Linear Regression
- Train Model
- Score Model
- Evaluate Model

Properties Panel (Select Columns in Dataset):

- Select columns: All columns
- Column names: price
- START TIME: 9/22/2021 ...
- END TIME: 9/22/2021 ...
- ELAPSED TIME: 0:00:00.000
- STATUS CODE: Finished
- STATUS DETAILS: Task output was present in output cache

Microsoft Machine Learning Studio (classic) - AUTOMOBILE PRICE PREDICTION(19K41A0587)

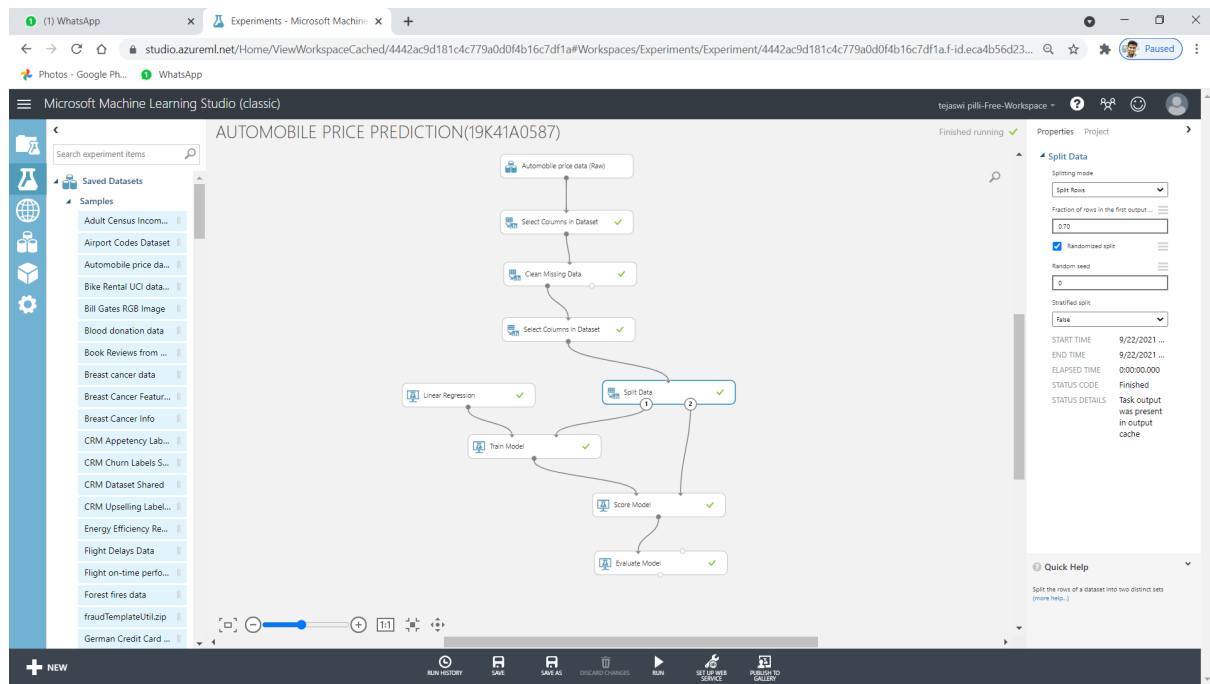
Workflow steps:

- Automobile price data (Raw)
- Select Columns in Dataset
- Evaluate Model

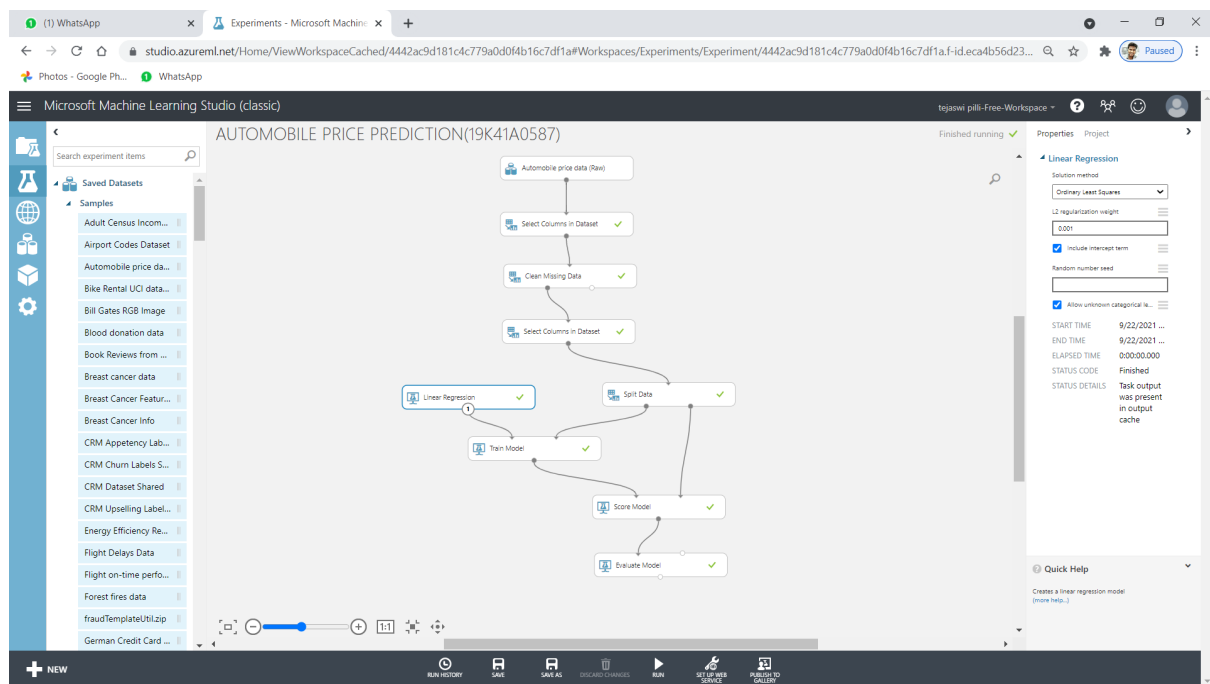
Select columns dialog box:

- BY NAME
- WITH RULES
- Begin With: ALL COLUMNS
- Include: column names, price
- Allow duplicates and preserve column order in selection

SPLIT DATA:-



USING LINEAR REGRESSION TO TRAIN THE MODEL:-

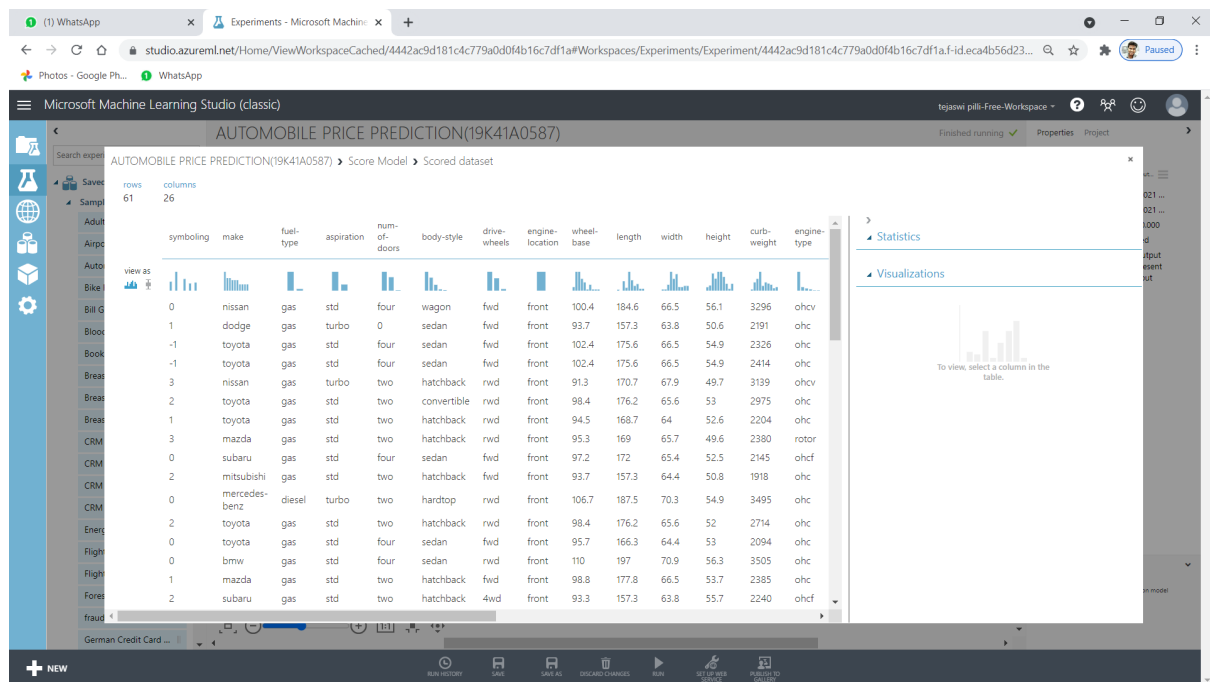
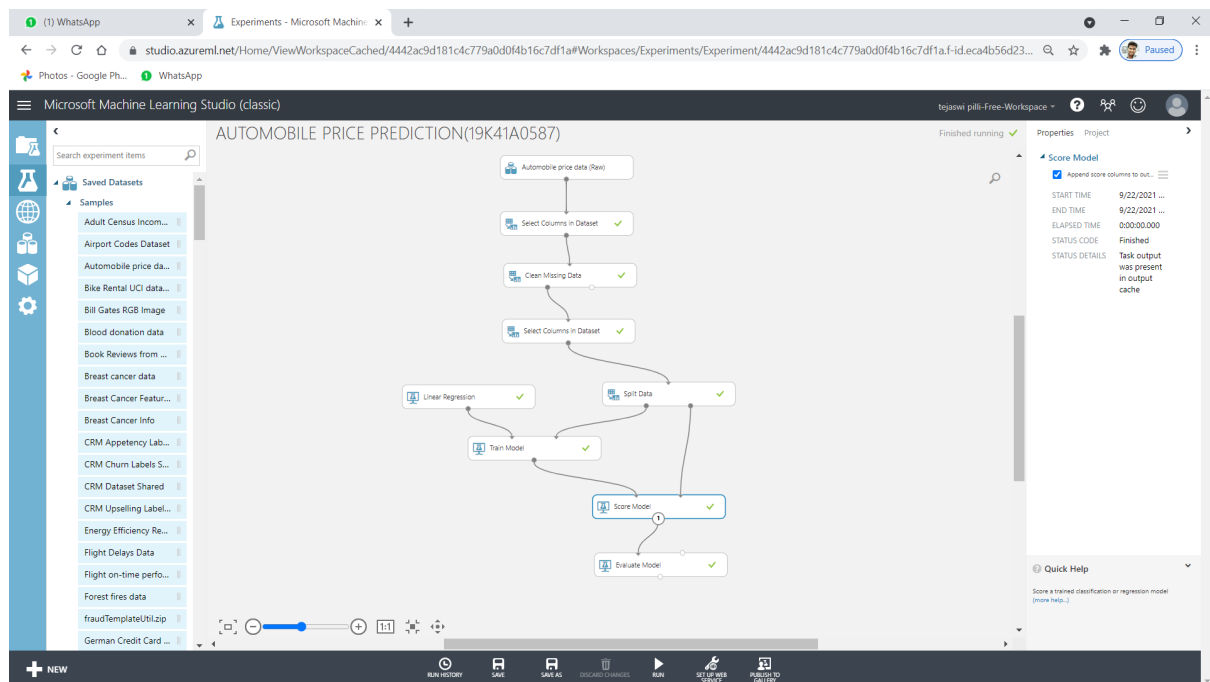


TRAIN MODELLING AND ALGORITHM:-

The screenshot displays the Microsoft Machine Learning Studio interface. The main workspace shows a workflow titled "AUTOMOBILE PRICE PREDICTION(19K41A0587)". The workflow consists of the following steps: "Automobile price data (Raw)", "Select Columns in Dataset", "Clean Missing Data", "Split Data", "Train Model", "Score Model", and "Evaluate Model". The "Train Model" step is currently selected, and its properties are shown in the right-hand pane. The "Label column" is set to "price". The "Train Model" properties pane also shows the "Selected columns" as "Column names: price". The "Train Model" step is marked as "Finished running".

The screenshot displays the Microsoft Machine Learning Studio interface. The main workspace shows a workflow titled "AUTOMOBILE PRICE PREDICTION(19K41A0587)". The workflow consists of the following steps: "Automobile price data (Raw)", "Select Columns in Dataset", "Clean Missing Data", "Split Data", "Train Model", "Score Model", and "Evaluate Model". The "Evaluate Model" step is currently selected, and a "Select a single column" dialog box is open. The dialog box shows a list of columns, and the "price" column is selected. The "Evaluate Model" step is marked as "Finished running".

SCORE MODEL AND EVALUATION MODEL:-



EVALUATION RESULTS:-

Microsoft Machine Learning Studio (classic)

AUTOMOBILE PRICE PREDICTION(19K41A0587)

Finished running

Properties Project

Evaluate Model

START TIME: 9/22/2021 ...
END TIME: 9/22/2021 ...
ELAPSED TIME: 00:00:00.000
STATUS CODE: Finished
STATUS DETAILS: Task output was present in output cache

Quick Help

Evaluates a scored classification or regression model with standard metrics. (show help...)

Workflow steps:

- Automobile price data (Raw)
- Select Columns in Dataset
- Clean Missing Data
- Select Columns in Dataset
- Split Data
- Linear Regression
- Train Model
- Score Model
- Evaluate Model

Search experiment items

Saved Datasets

Samples

- Adult Census Incom...
- Airport Codes Dataset
- Automobile price da...
- Bike Rental UCI data...
- Bill Gates RGB Image
- Blood donation data
- Book Reviews from ...
- Breast cancer data
- Breast Cancer Featu...
- Breast Cancer Info
- CRM Appetency Lab...
- CRM Churn Labels S...
- CRM Dataset Shared
- CRM Upselling Label...
- Energy Efficiency Re...
- Flight Delays Data
- Flight on-time perfo...
- Forest fires data
- fraudTemplateUbl.zip
- German Credit Card ...

NEW

RUN HISTORY SAVE SAVE AS DISCARD CHANGES RUN SET UP WEB SERVICE PUBLISH TO CLOUD

Microsoft Machine Learning Studio (classic)

AUTOMOBILE PRICE PREDICTION(19K41A0587)

Finished running

Properties Project

Evaluate Model

START TIME: 9/22/2021 ...
END TIME: 9/22/2021 ...
ELAPSED TIME: 00:00:00.000
STATUS CODE: Finished
STATUS DETAILS: Task output was present in output cache

Quick Help

Evaluates a scored classification or regression model with standard metrics. (show help...)

Workflow steps:

- Automobile price data (Raw)
- Select Columns in Dataset
- Clean Missing Data
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Search experiment items

Saved Datasets

Samples

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- German Credit Card ...

NEW

RUN HISTORY SAVE SAVE AS DISCARD CHANGES RUN SET UP WEB SERVICE PUBLISH TO CLOUD

Metrics

| Metric | Value |
|------------------------------|-------------|
| Mean Absolute Error | 2688.238855 |
| Root Mean Squared Error | 3758.693629 |
| Relative Absolute Error | 0.36918 |
| Relative Squared Error | 0.158758 |
| Coefficient of Determination | 0.841242 |

Error Histogram

Frequency

Error