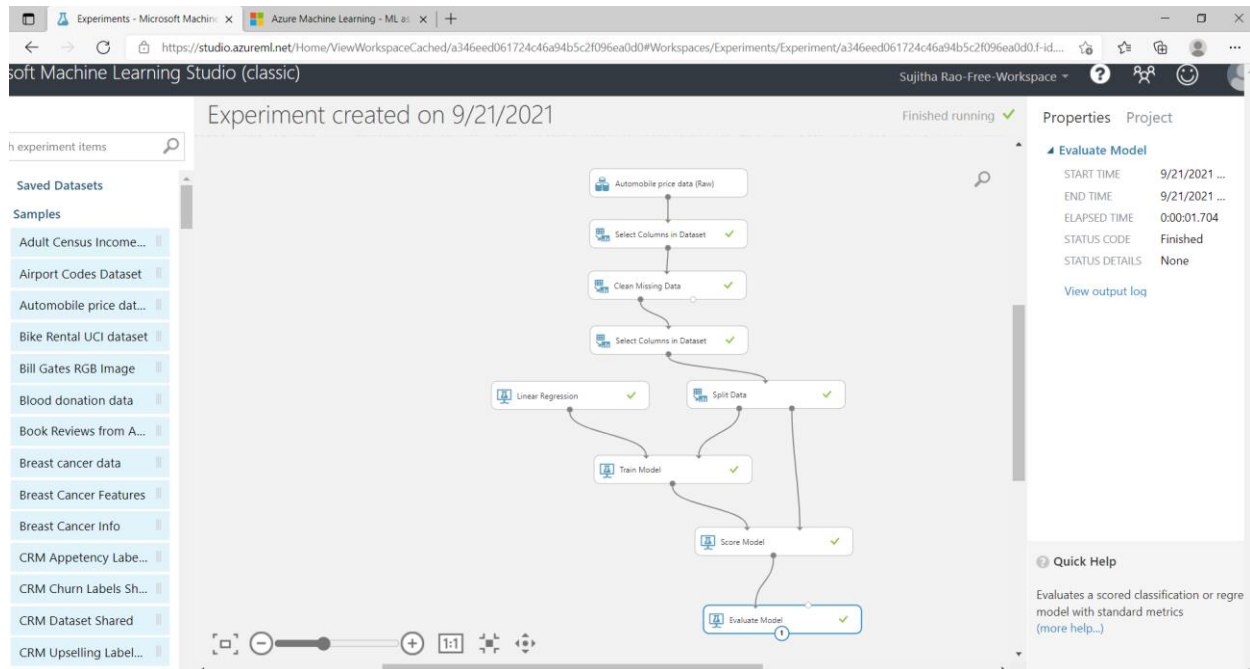


AI ASSIGNMENT

19K41A05F3

Machine Learning Project Workflow :

Workflow:



Explore Data:

Experiments - Microsoft Machine Learning - ML Studio

https://studio.azureml.net/Home/ViewWorkspaceCached/a346eed061724c46a94b5c2f096ea0d0f-id-...

Microsoft Machine Learning Studio (classic)

Sujitha Rao-Free-Workspace

Experiment created on 9/21/2021

Finished running

h experiment items

Saved Datasets

Samples

- Adult Census Income...
- Airport Codes Dataset
- Automobile price dat...
- Bike Rental UCI dataset
- Bill Gates RGB Image
- Blood donation data
- Book Reviews from A...
- Breast cancer data
- Breast Cancer Features
- Breast Cancer Info
- CRM Appetency Labe...
- CRM Churn Labels Sh...
- CRM Dataset Shared
- CRM Upselling Label...

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 Project

Select Columns in Dataset

Select columns

Selected columns: All columns

Exclude column names: normalized-losses

Launch column selector

START TIME 9/21/2021 ...

END TIME 9/21/2021 ...

ELAPSED TIME 0:00:00.000

STATUS CODE Finished

STATUS DETAILS Task output was present in output cache

Quick Help

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

Experiments - Microsoft Machine Learning - ML Studio

https://studio.azureml.net/Home/ViewWorkspaceCached/a346eed061724c46a94b5c2f096ea0d0f-id-...

Microsoft Machine Learning Studio (classic)

Sujitha Rao-Free-Workspace

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Saved Datasets

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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 Project

Clean Missing Data

Columns to be cleaned

Selected columns: All columns

Launch column selector

Minimum missing value... 0

Maximum missing value... 1

Cleaning mode Remove entire row

START TIME 9/21/20...

END TIME 9/21/20...

ELAPSED TIME 0:00:00.0...

STATUS CODE Finished

STATUS DETAILS Task output

Quick Help

Specifies how to handle the values missing from a dataset (more help...)

Split Data:

The screenshot displays the Azure Machine Learning Studio interface. The main workspace shows a workflow diagram with the following steps: 'Automobile price data (Raw)', 'Select Columns in Dataset', 'Clean Missing Data', 'Select Columns in Dataset', 'Split Data', 'Train Model', 'Score Model', and 'Evaluate Model'. The 'Split Data' step is highlighted, and its properties are shown on the right. The 'Split Data' properties include: Splitting mode (Split Rows), Fraction of rows in the ... (0.70), Randomized split (checked), Random seed (0), and Stratified split (False). The 'Train Model' step is also highlighted, and its properties are shown on the right. The 'Train Model' properties include: Label column (Selected columns: Column names: price), START TIME (9/21/2021 ...), END TIME (9/21/2021 ...), ELAPSED TIME (0:00:00.000), STATUS CODE (Finished), and STATUS DETAILS (Task output was present in output cache).

Model Training and Algorithm:

The screenshot displays the Azure Machine Learning Studio interface. The main workspace shows a workflow diagram with the following steps: 'Automobile price data (Raw)', 'Select Columns in Dataset', 'Clean Missing Data', 'Select Columns in Dataset', 'Split Data', 'Train Model', 'Score Model', and 'Evaluate Model'. The 'Train Model' step is highlighted, and its properties are shown on the right. The 'Train Model' properties include: Label column (Selected columns: Column names: price), START TIME (9/21/2021 ...), END TIME (9/21/2021 ...), ELAPSED TIME (0:00:00.000), STATUS CODE (Finished), and STATUS DETAILS (Task output was present in output cache).

Using Linear Regression to train the model:

The screenshot displays the Azure Machine Learning Studio (classic) interface. The main workspace shows a workflow diagram for an experiment created on 9/21/2021. The workflow consists of the following steps: 'Automobile price data (Raw)', 'Select Columns in Dataset', 'Clean Missing Data', 'Select Columns in Dataset', 'Split Data', 'Linear Regression', 'Train Model', 'Score Model', and 'Evaluate Model'. All steps are marked as completed with green checkmarks. The 'Linear Regression' step is highlighted in the 'Properties' pane on the right. The properties for 'Linear Regression' are: Solution method: Ordinary Least Squares, L2 regularization weight: 0.001, Include intercept term: checked, Random number seed: (empty), Allow unknown categorical levels: checked. The 'Quick Help' section at the bottom right states: 'Creates a linear regression model (more help...)'. The 'Properties' pane also shows the experiment's start and end times, elapsed time, status code, and status details.

Score Model and Evaluation Model:

The screenshot displays the Azure Machine Learning Studio (classic) interface, showing the 'Scored dataset' table. The table has 58 rows and 26 columns. The columns are: fuel-system, bore, stroke, compression-ratio, horsepower, peak-rpm, city-mpg, highway-mpg, price, and Scored Labels. The table contains numerical data for each row. A 'Statistics' visualization is shown on the right side of the table, displaying a histogram of the 'Scored Labels' column. The histogram shows a distribution of values, with a peak around 13284.899402. The 'Statistics' section also includes a 'Visualizations' subsection with a placeholder for a chart.

fuel-system	bore	stroke	compression-ratio	horsepower	peak-rpm	city-mpg	highway-mpg	price	Scored Labels
mpfi	3.54	3.07	9.3	110	5250	21	28	15510	13284.899402
spdi	3.03	3.39	7.6	102	5500	24	30	7689	7658.867692
mpfi	3.19	3.4	9	85	5250	27	34	8195	8863.220012
2bbl	3.03	3.11	9.6	70	5400	38	43	6295	5905.454253
spfi	3.43	3.23	9.2	90	5000	24	29	11048	10750.34708
mpfi	3.46	3.1	8.3	155	4750	16	18	34184	38369.412133
2bbl	3.15	3.29	9.4	69	5200	31	37	5499	5894.125916
mpfi	3.03	3.39	7.6	102	5500	24	30	7957	9549.224752
mpfi	3.62	3.39	8	182	5400	16	22	41315	30915.948926
mpfi	3.78	3.15	9.5	114	5400	19	25	22625	19695.952699

Evaluation Results:

