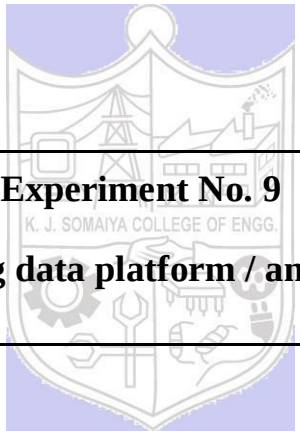

Experiment No. 9

Title: Case study: Big data platform / analytics as business need)

Batch: A1 **Roll No.: 1714014** **Experiment No.:9**

Case study: Bike Buyers Prediction

Resources needed: Internet Connection, Microsoft Azure Account

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Describe the following points with respect to the business under consideration,

1. **Problem faced by the business**

Answer:
The system is so designed that it helps to predicts whether a person is interested in purchasing a bike, so it helps the sales team to improvise their business by targeting the audience who they are sure will be most likely be looking to buy a bike so that their company can gain good profits and increase their total revenue.

2. **Approach/ Methodology followed by the business**

Answer:
The methodology is such that we first collected a dataset of people which had attributes like age, income, gender, no of cars possessed and some other attributes. Then we select the attributes which are needed for the model and then we normalize those attributes.Then we split the dataset into training dataset and testing dataset. Then we trained the machine learning model using Two Class Logistic Regression with that dataset and then we tested that model. Then we evaluated the model for finding out its accuracy and precision.

3. **Skillsets, infrastructure and other impact on the business during implementation**

Answer:
Skillset: Cloud computing
Infrastructure: Microsoft Azure Cloud services
There were no as such impacts on the business during implementation.

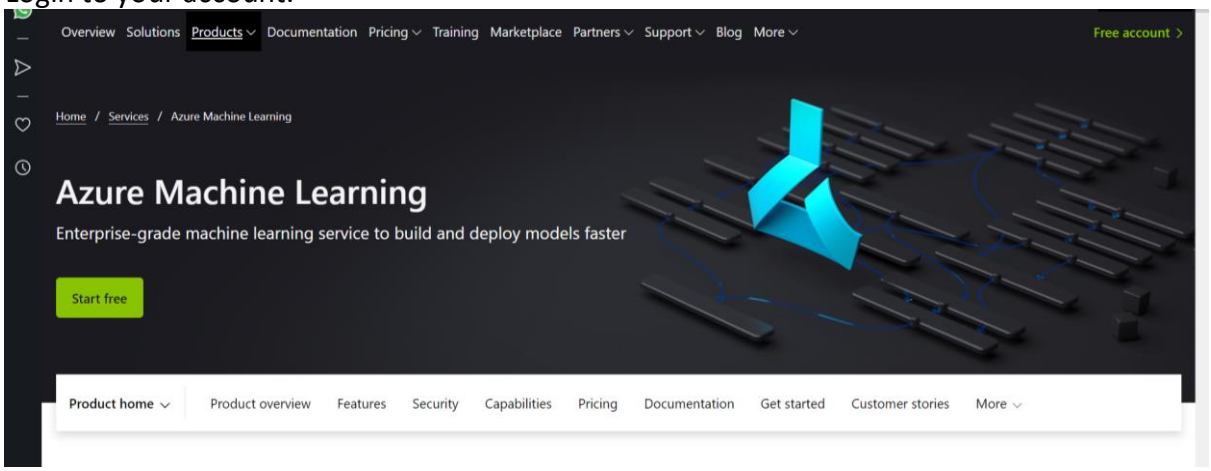
4. **Similar approaches followed by other businesses**

Answer:
Other businesses are still not using ML in order to predict whether a person is interested in purchasing a bike or not and they rather use traditional methods and thus some companies face problems like loss in business revenues.

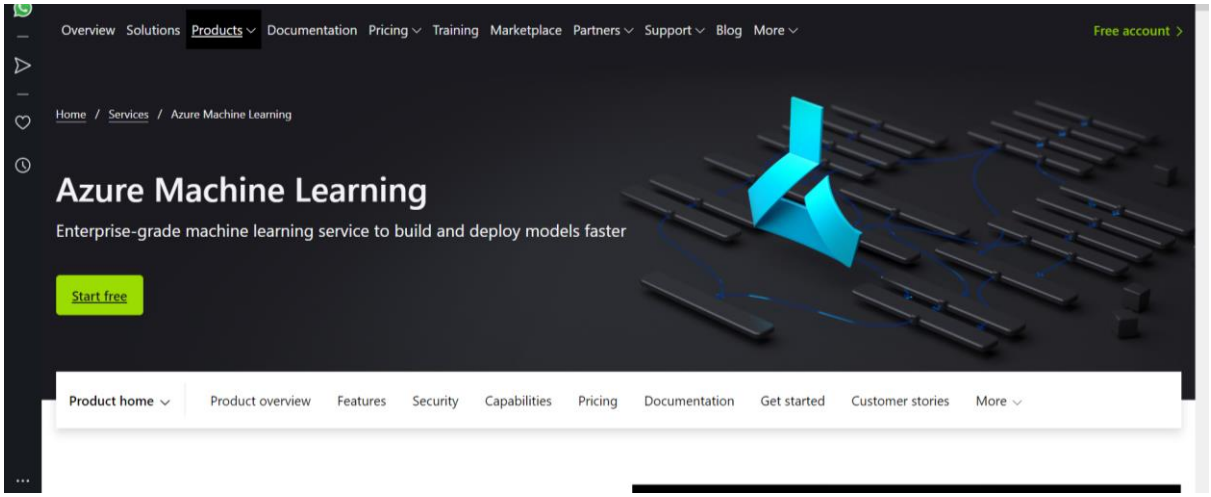
Steps:

Go to https://azure.microsoft.com/en-in/services/machine-learning/

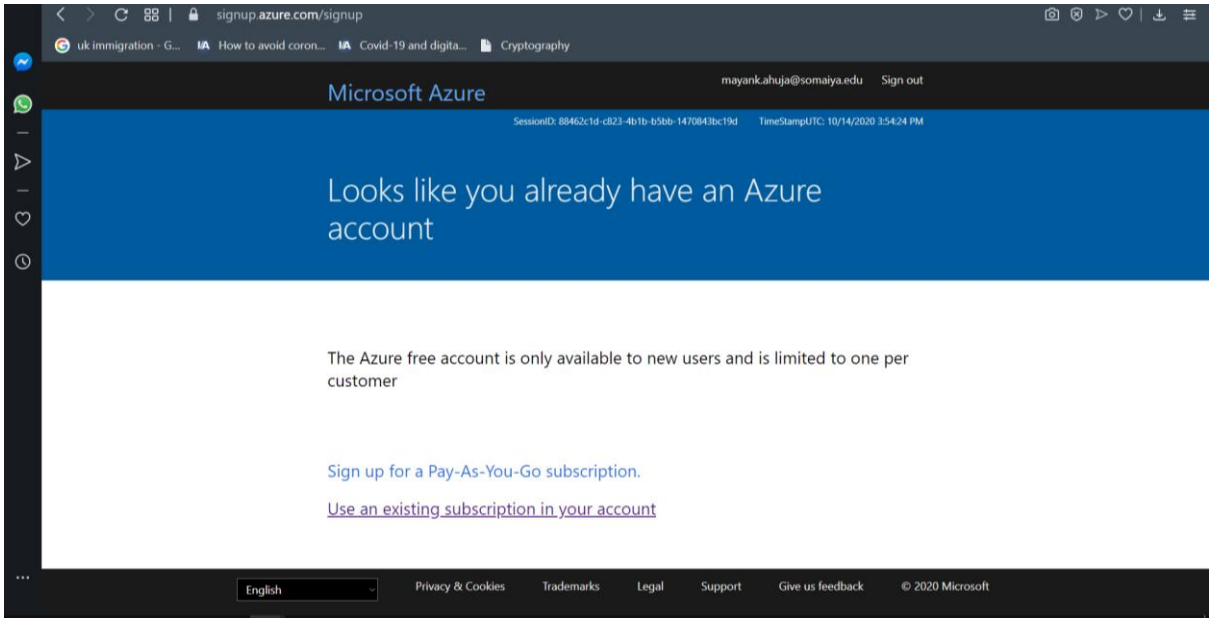
Login to your account.



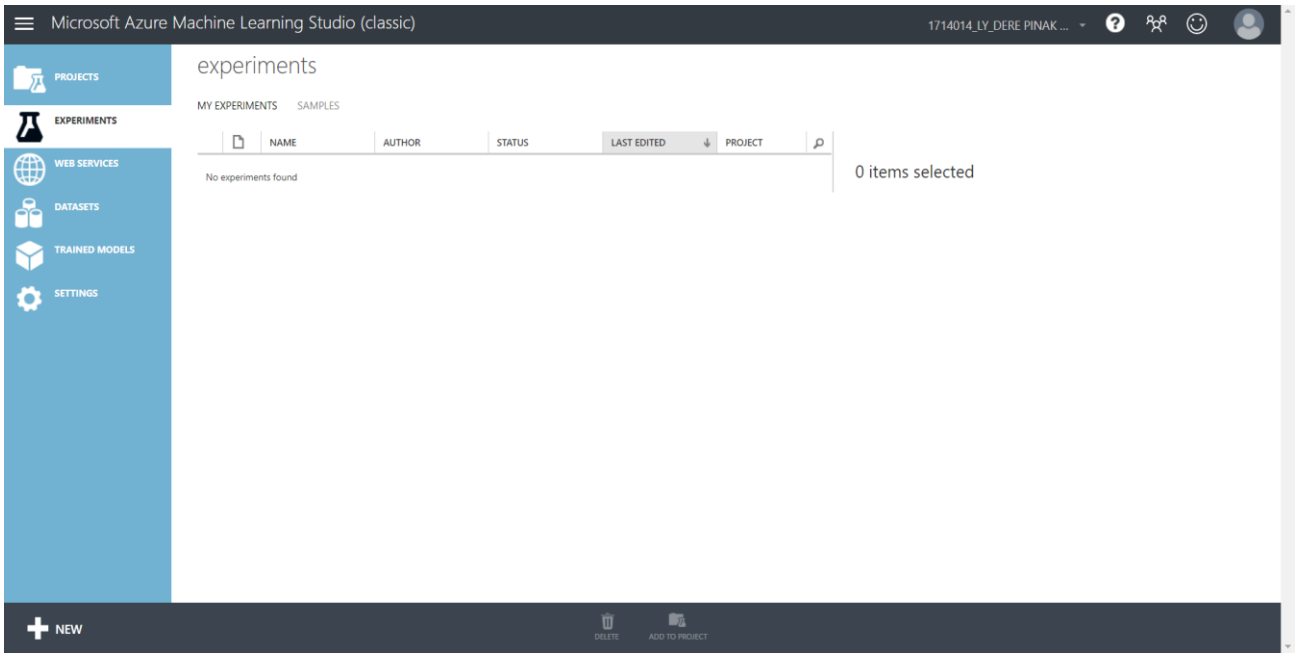
Click on start free



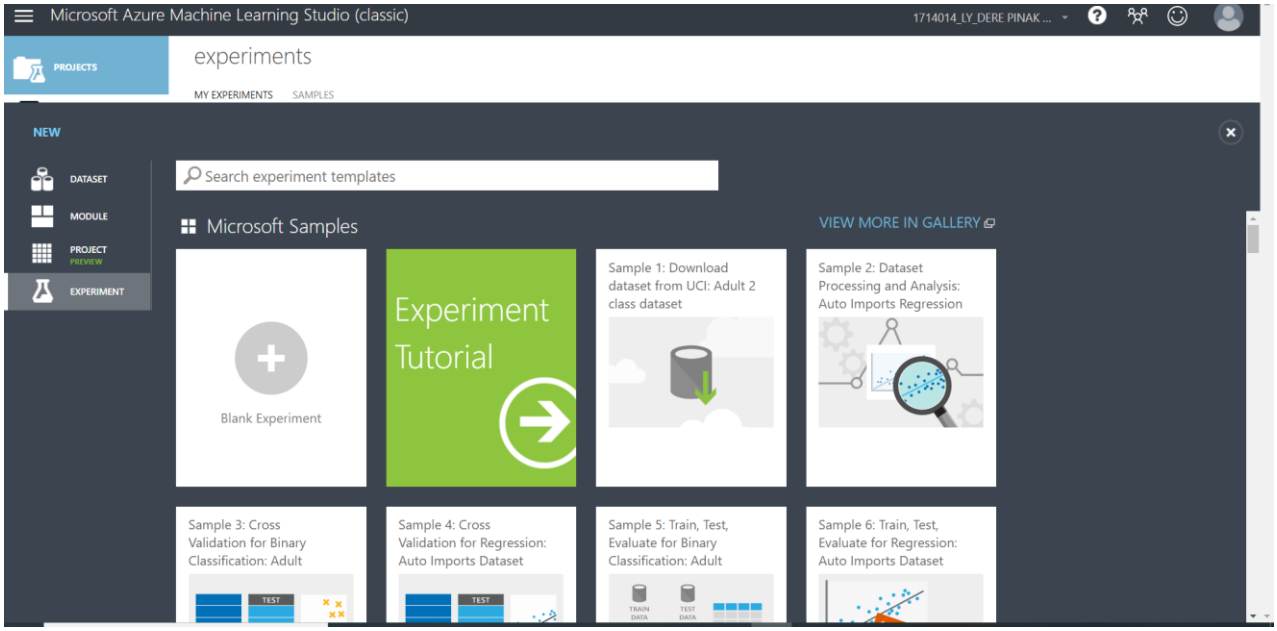
Use existing subscription on your account.



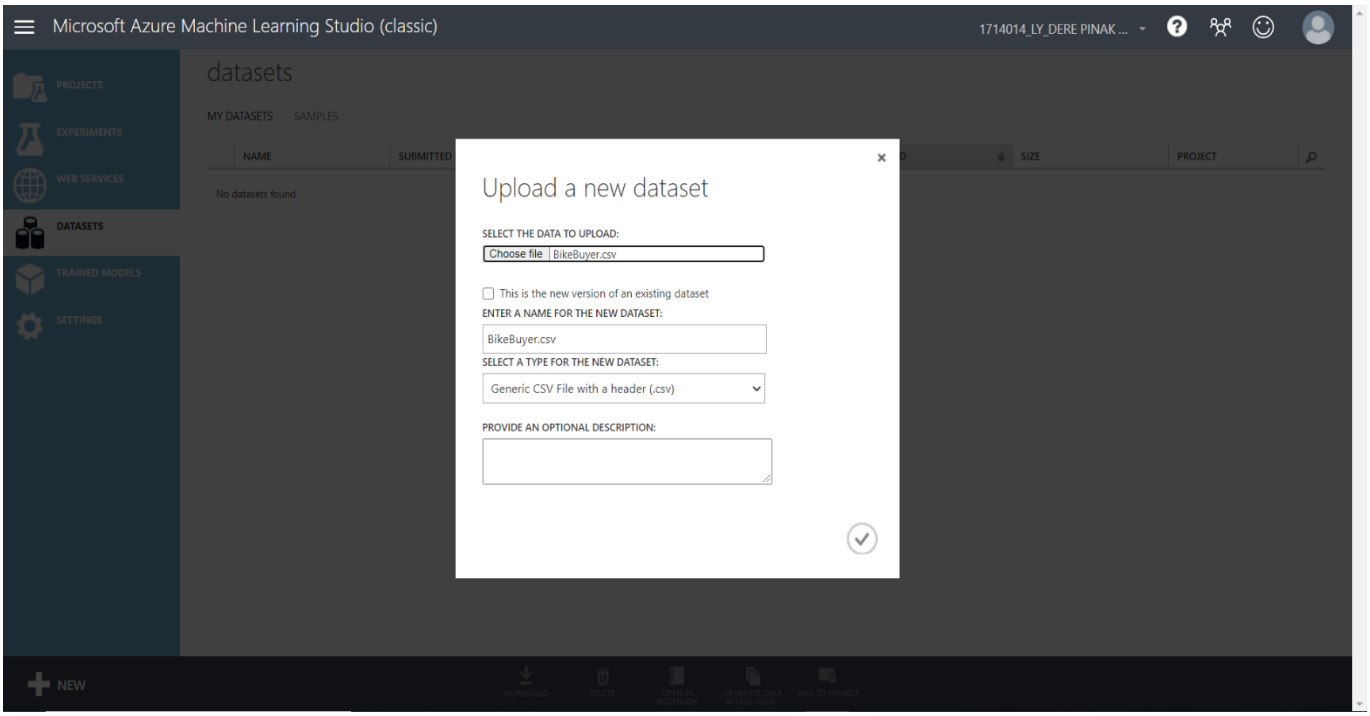
Open Azure and Login.



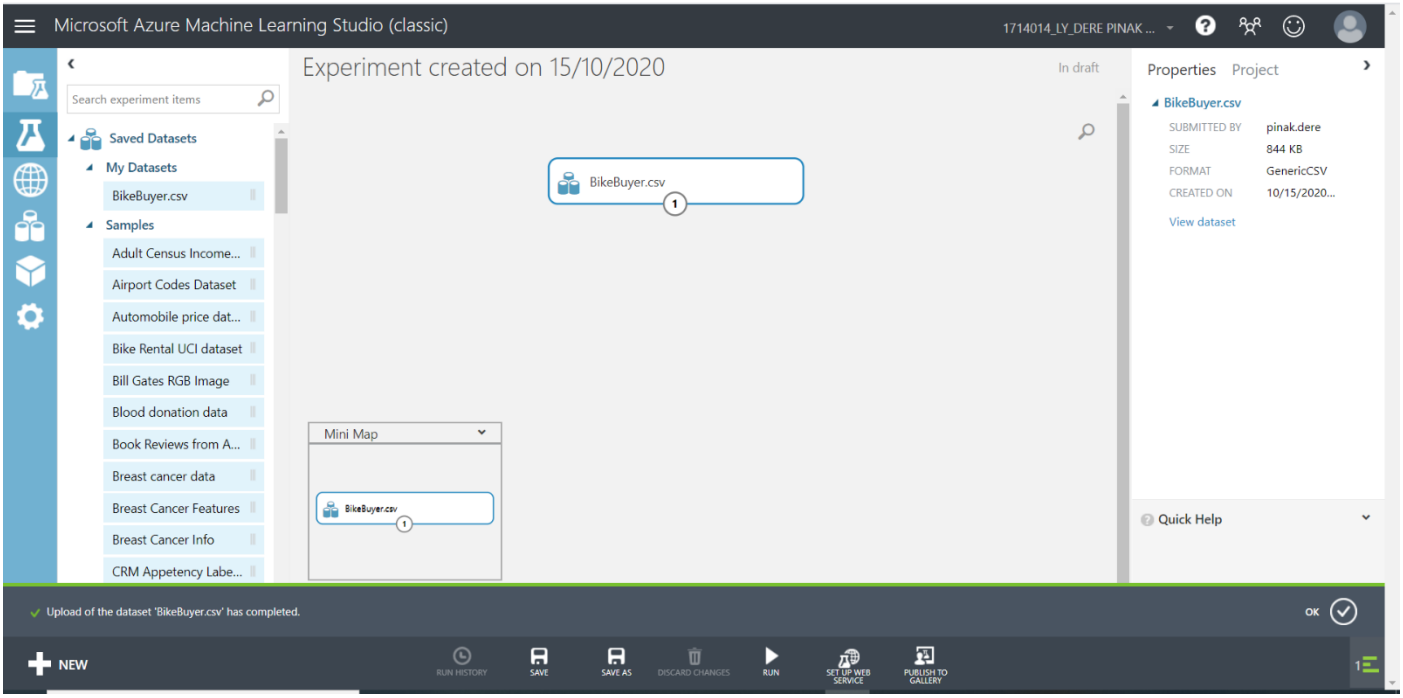
Go to experiments section and create a blank experiment.



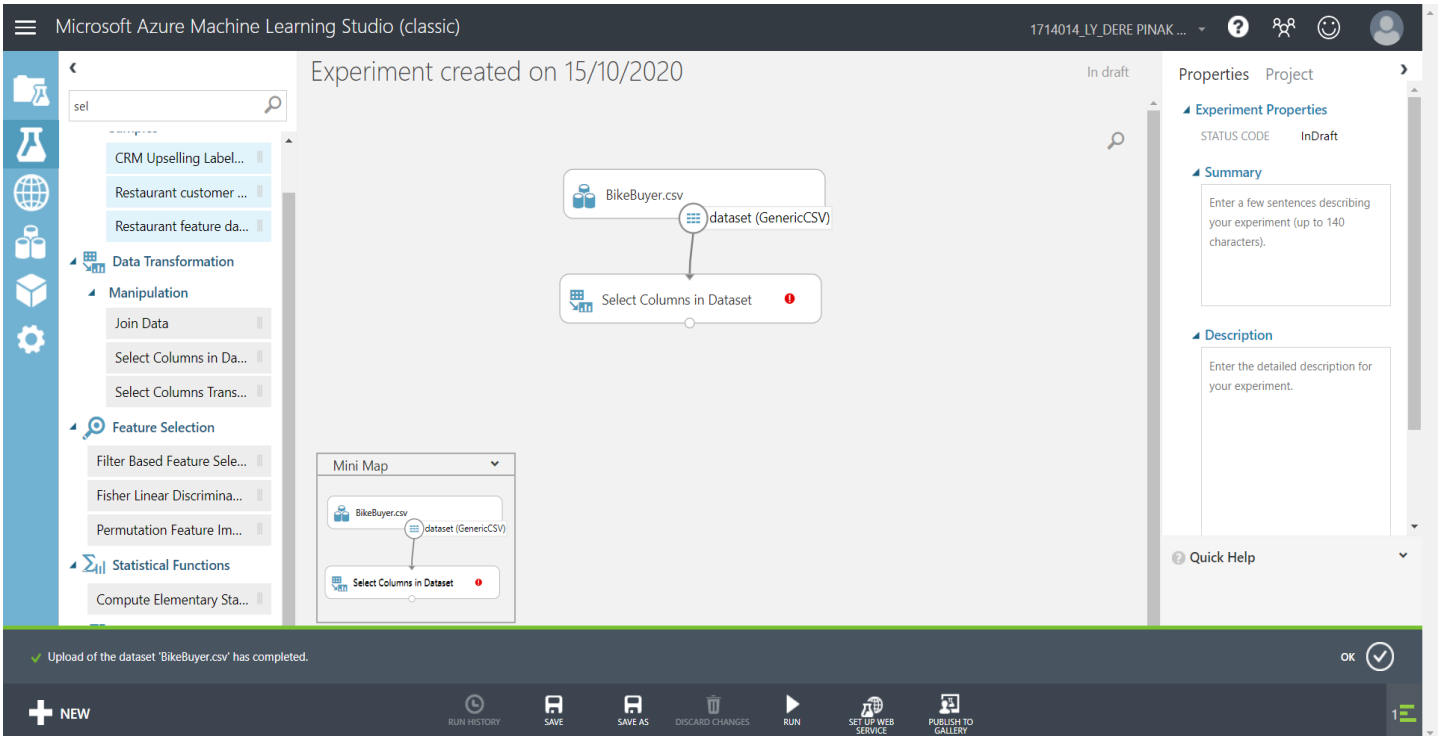
Upload the dataset to import from the local files.



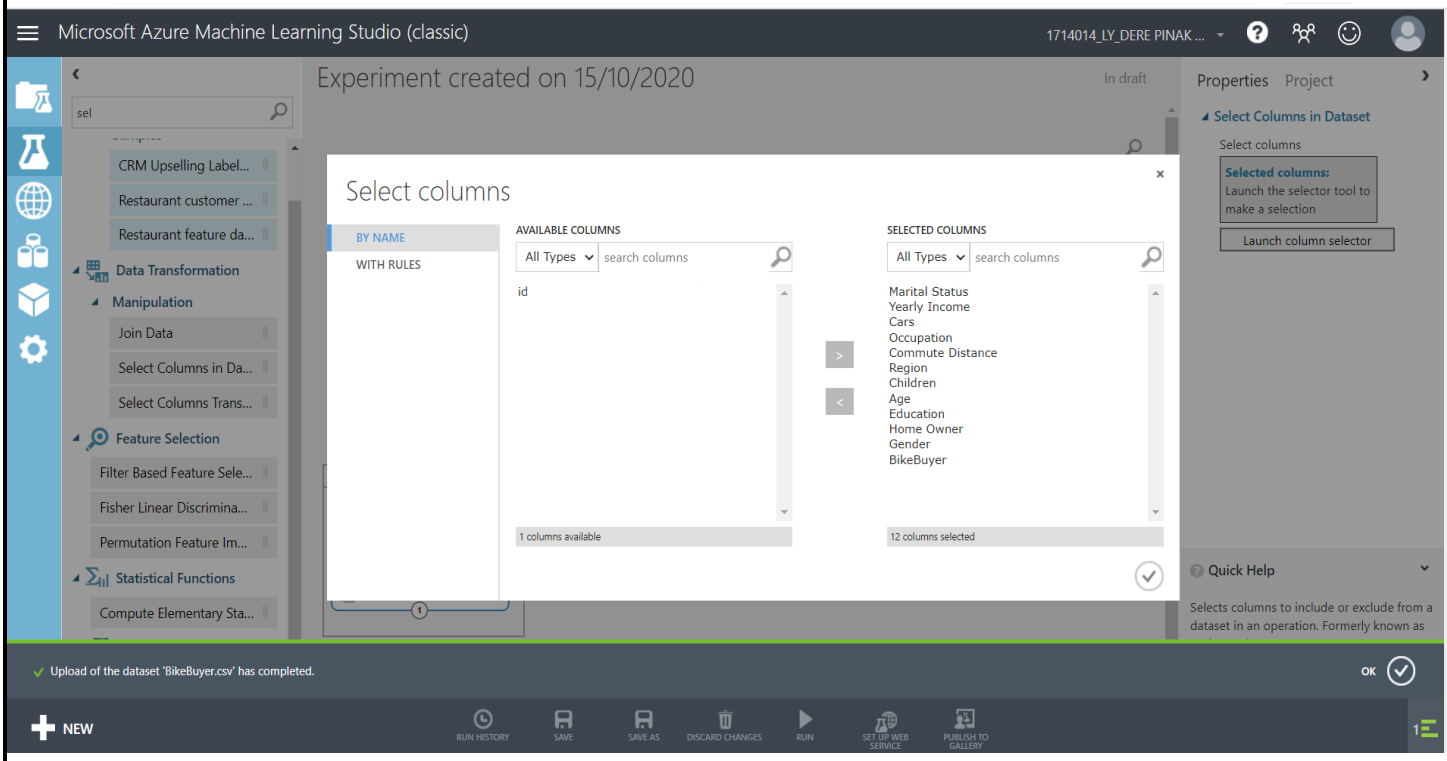
Add the BikeBuyers.csv file to the layout of the experiment.



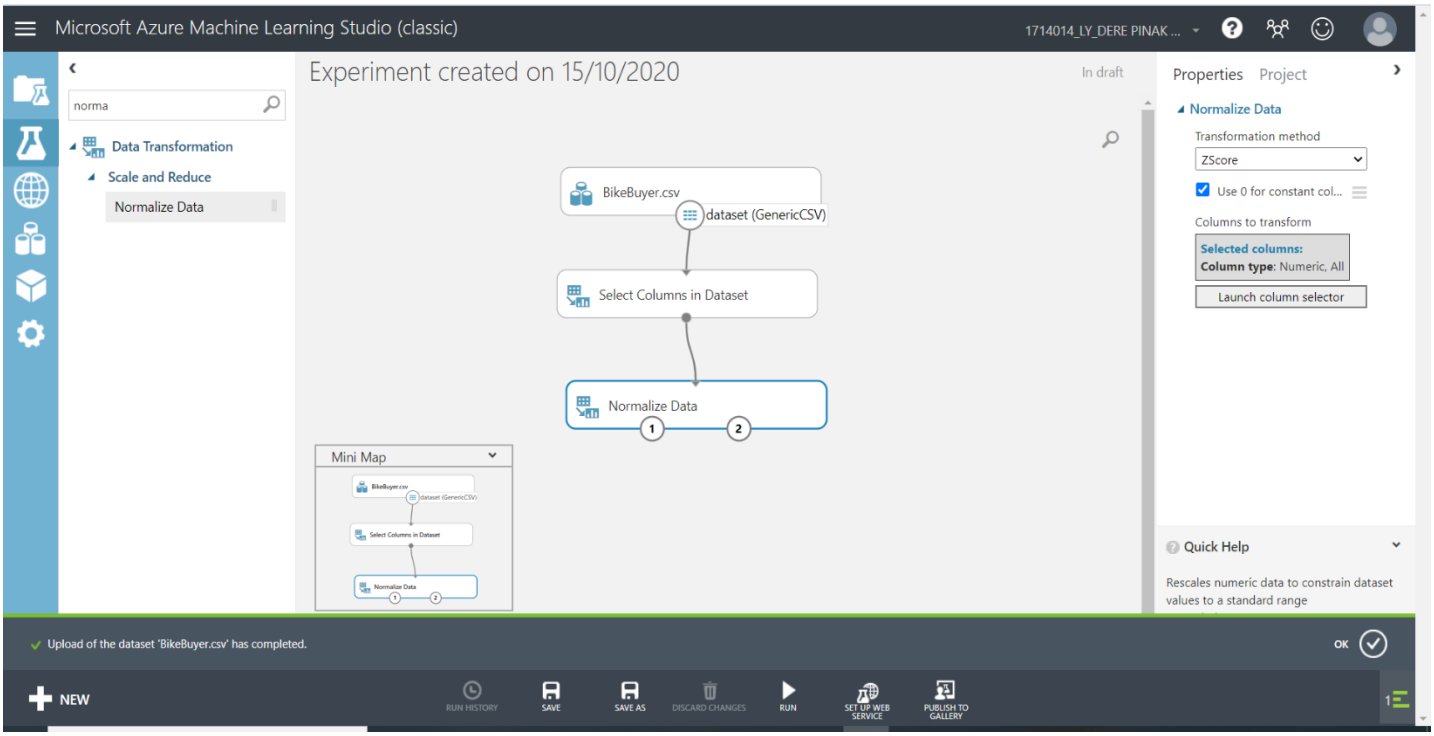
Add Select Columns in Dataset to select certain columns for prediction.

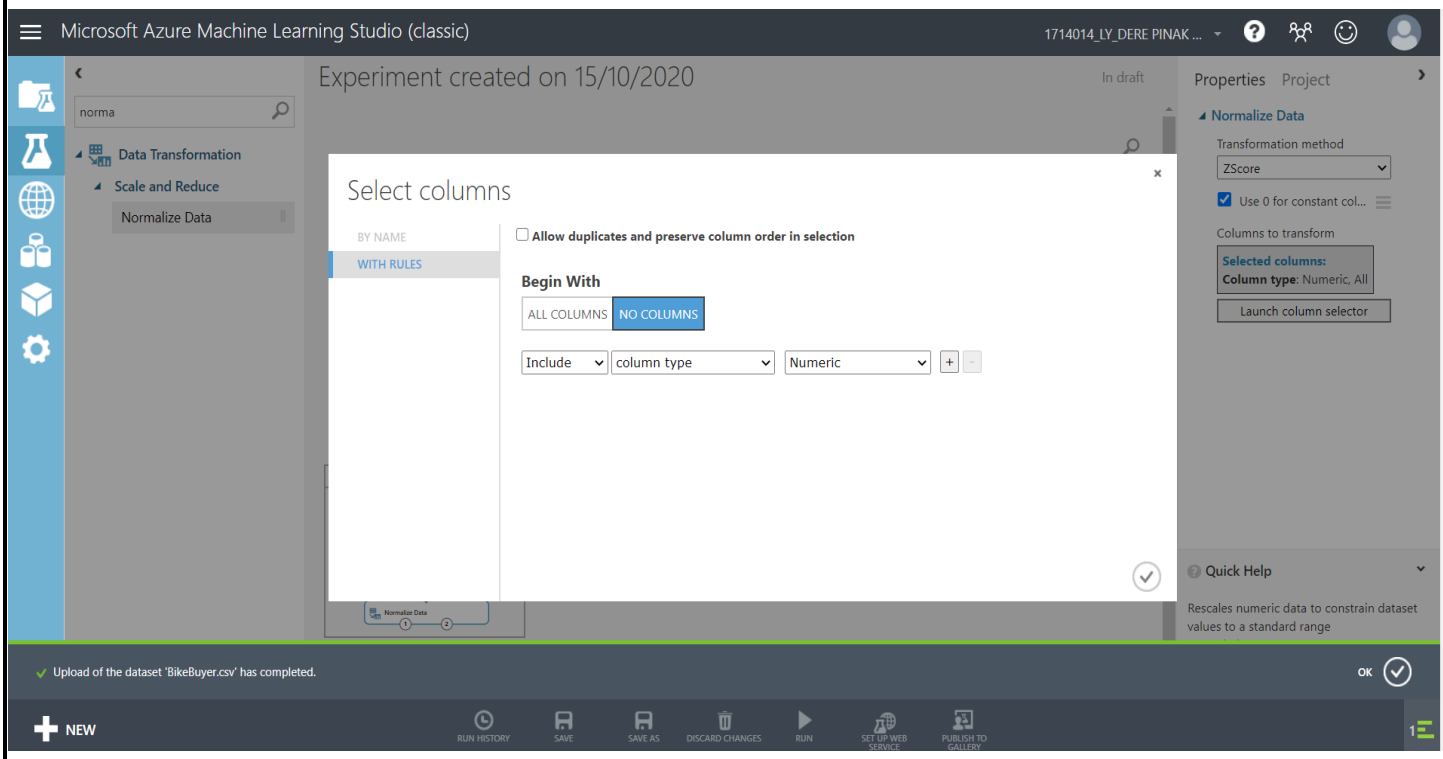


Select the attributes which we want to use for the model development.

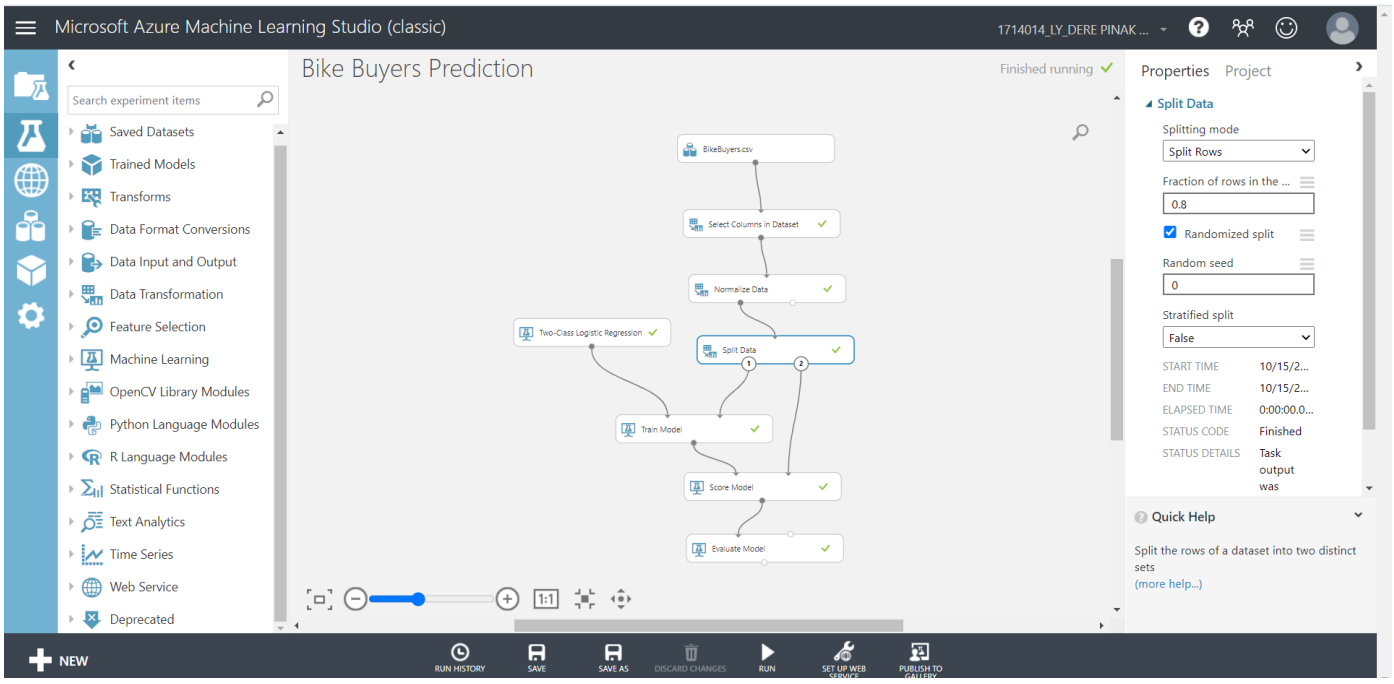


Normalize the dataset.

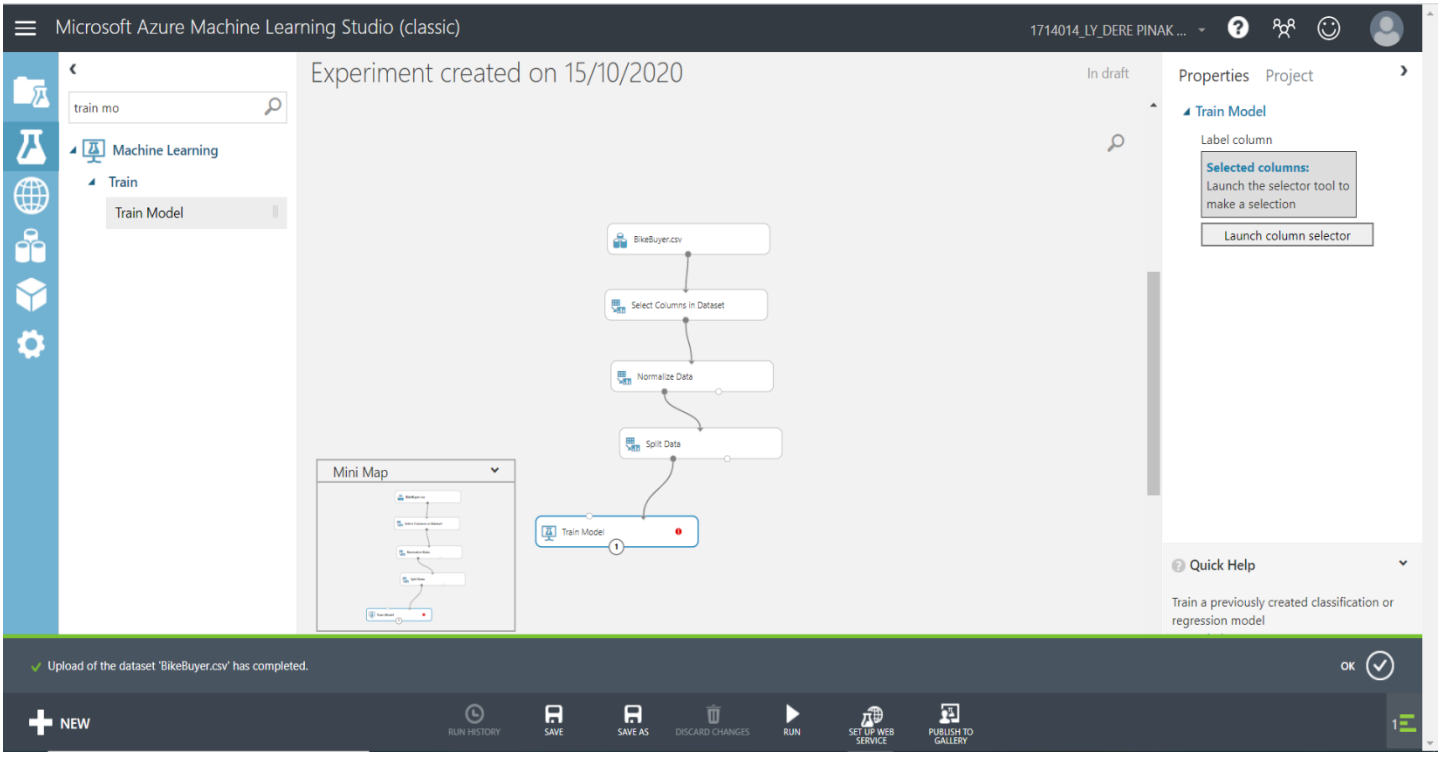




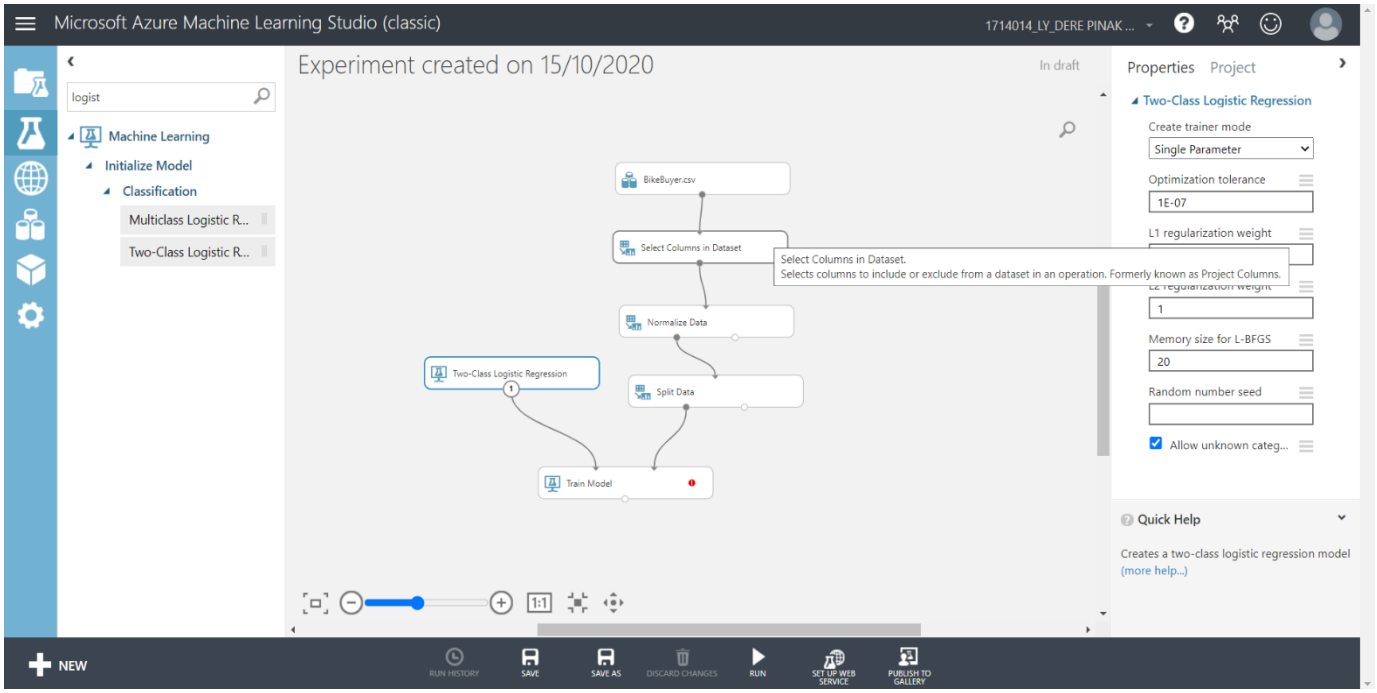
Add Split Data function to split the data such that 80% will be used for model training and 20% will be used for testing the model.



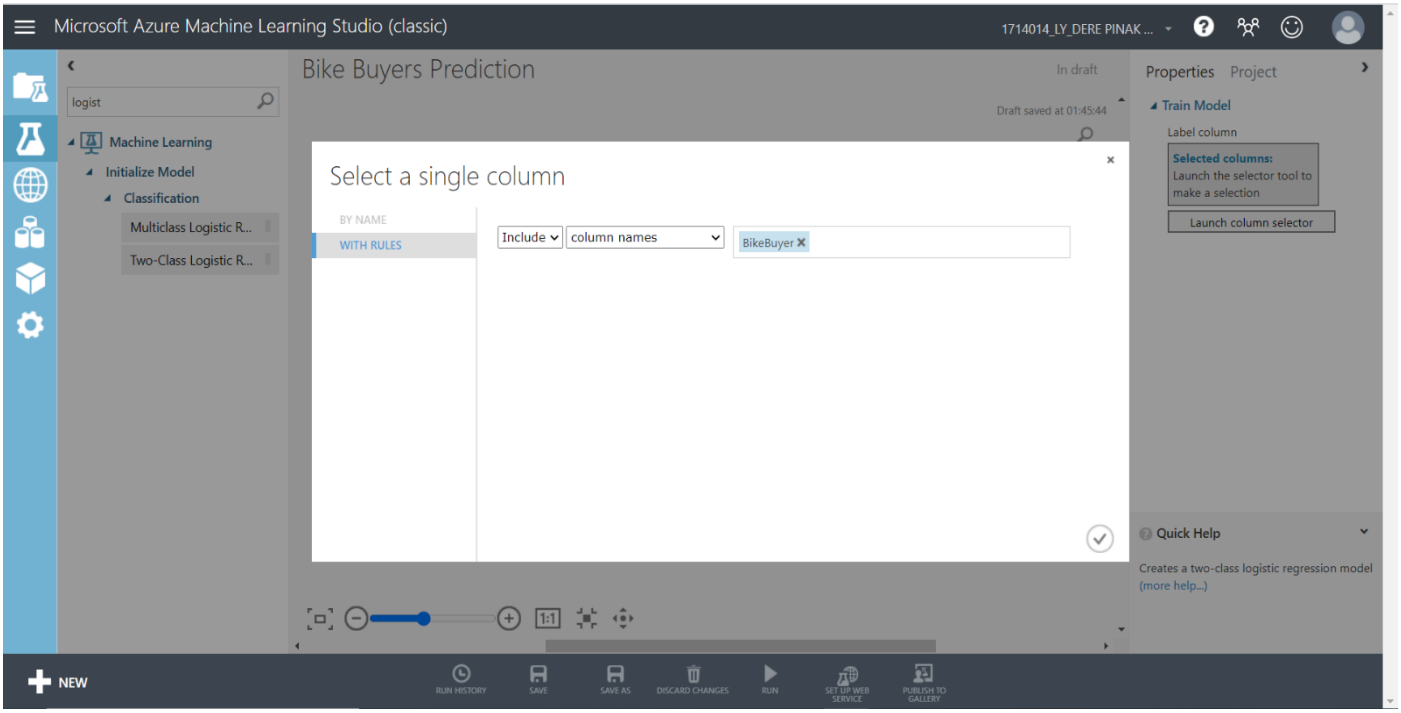
Add Train Model function for training the model.



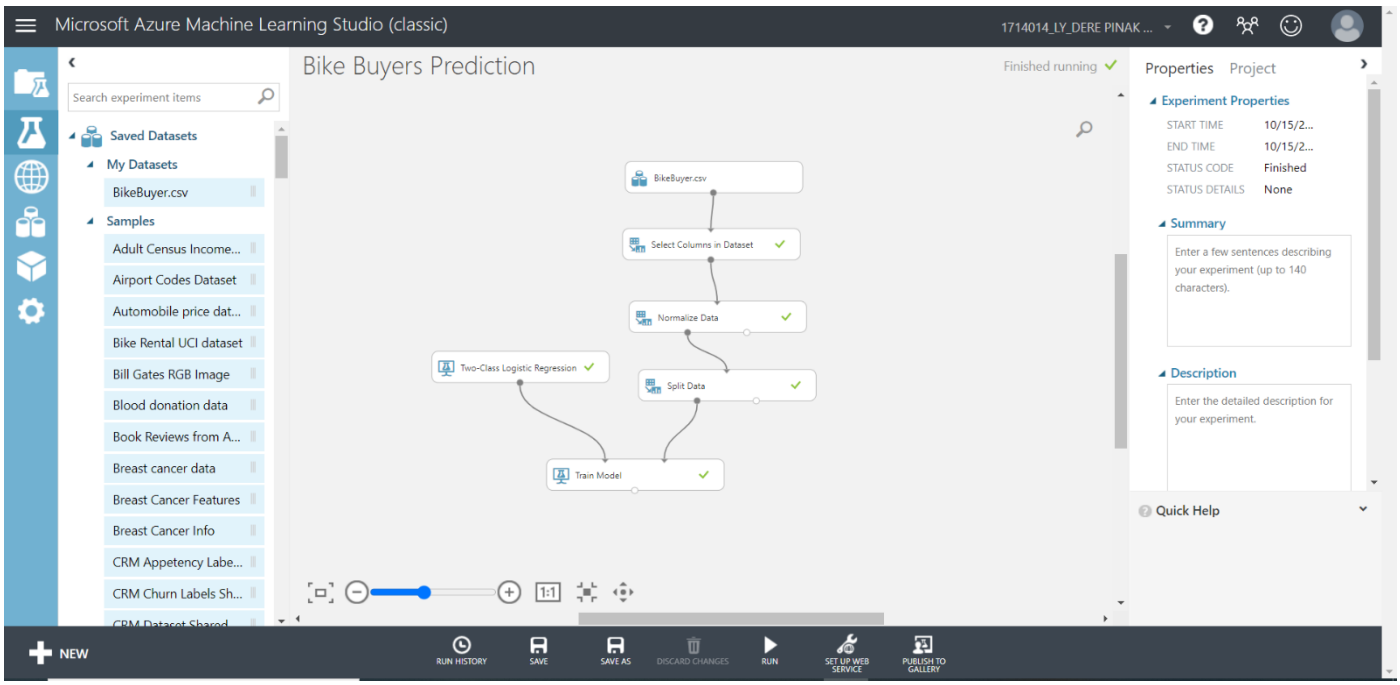
Add Two-Class Logistic Regression to the layout



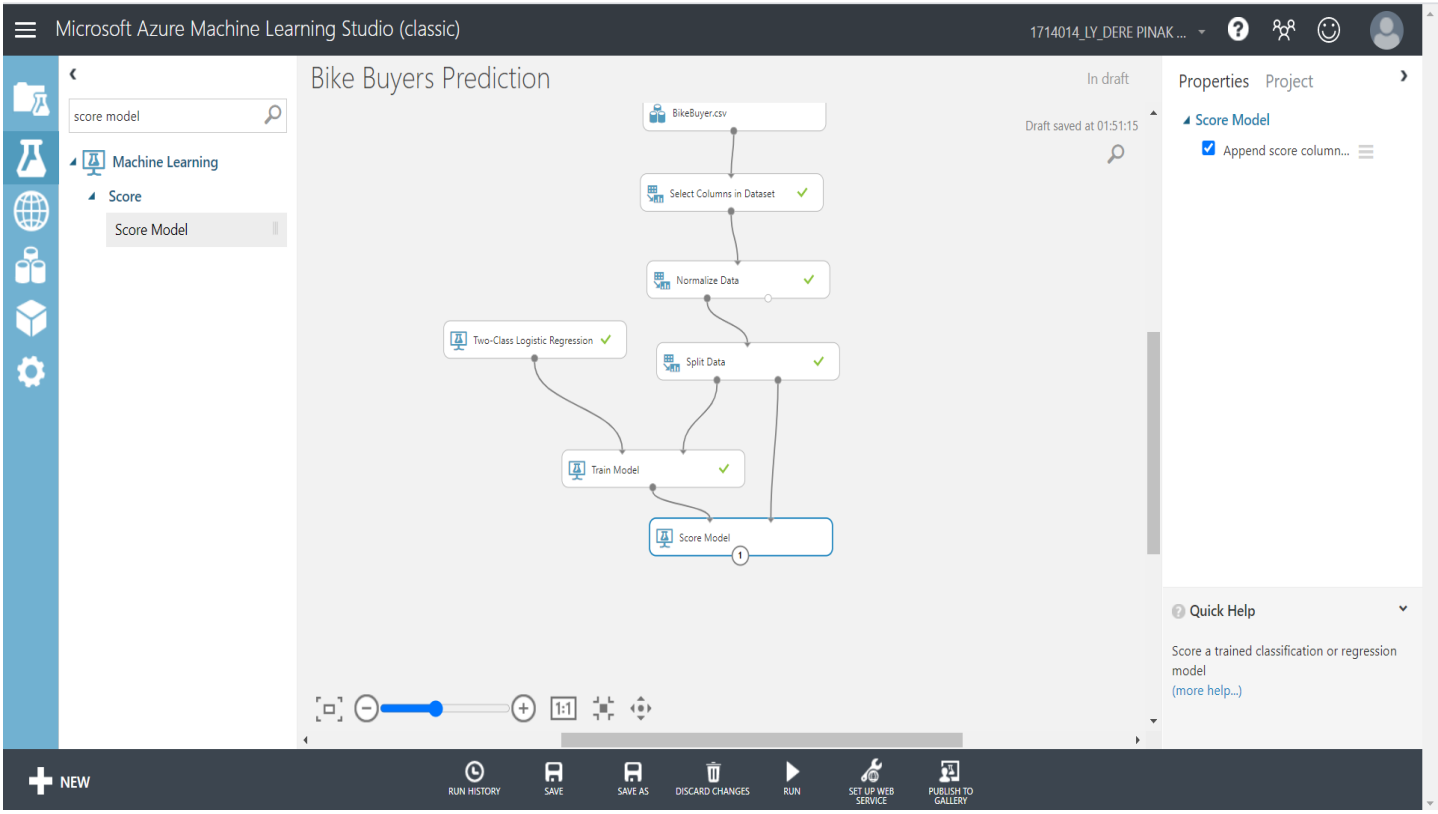
Select the attribute on which prediction will be performed.



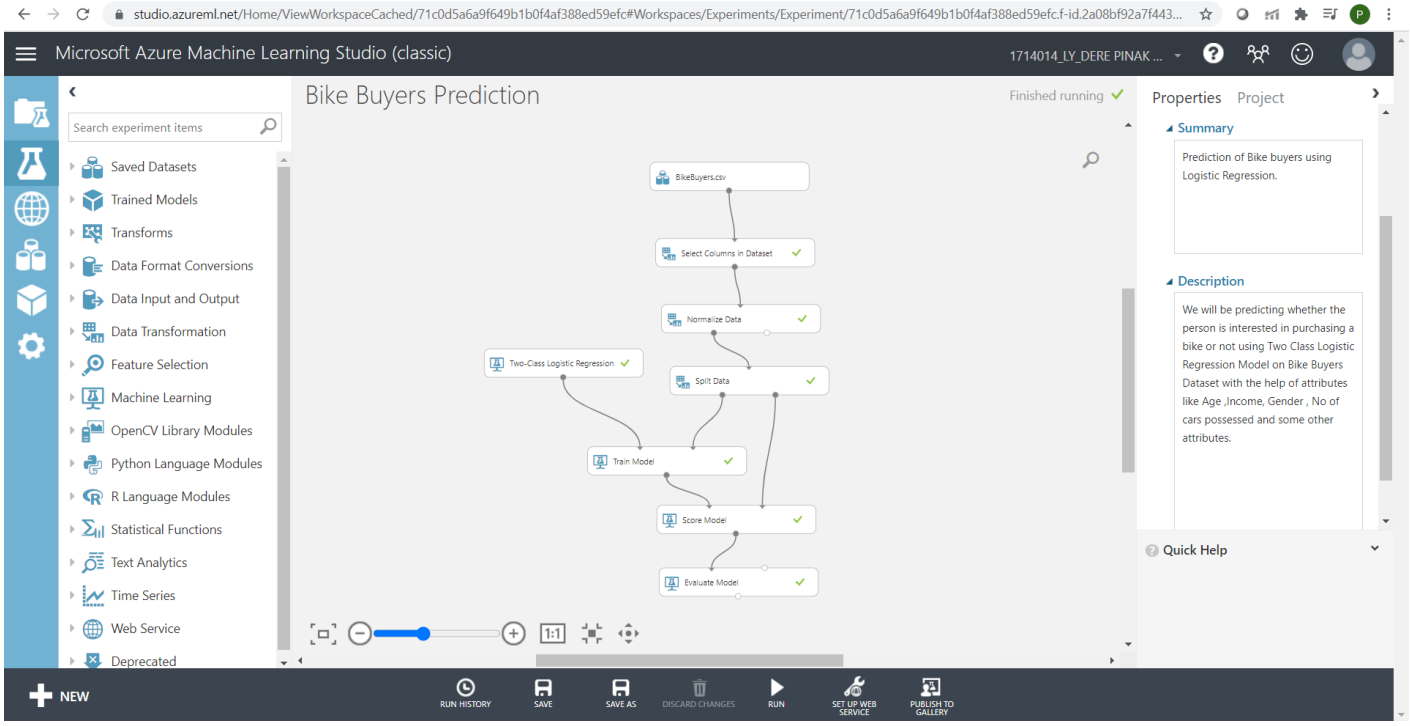
Execute the training of the model



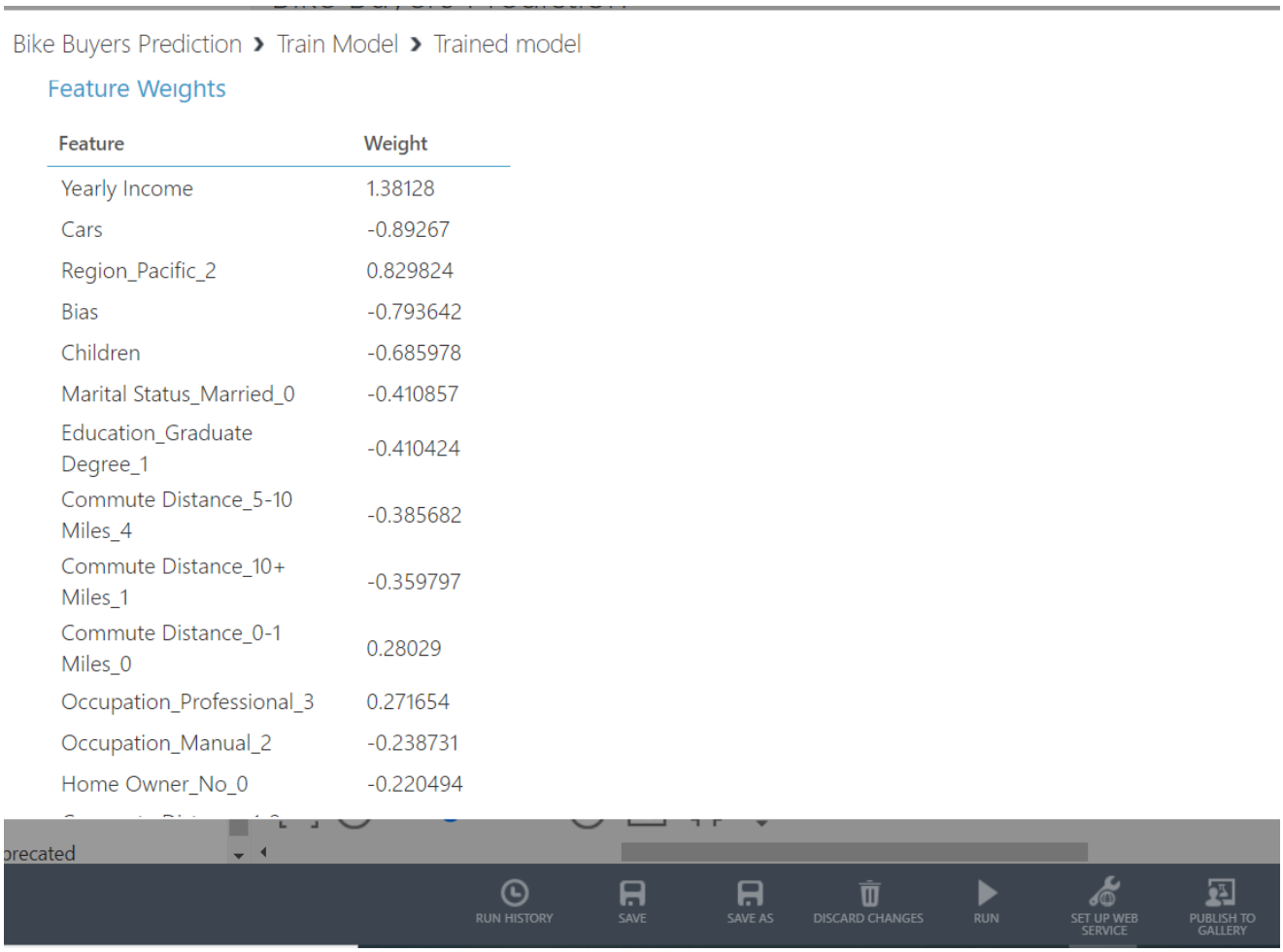
Add Score Model to the layout so that the trained model can be tested.



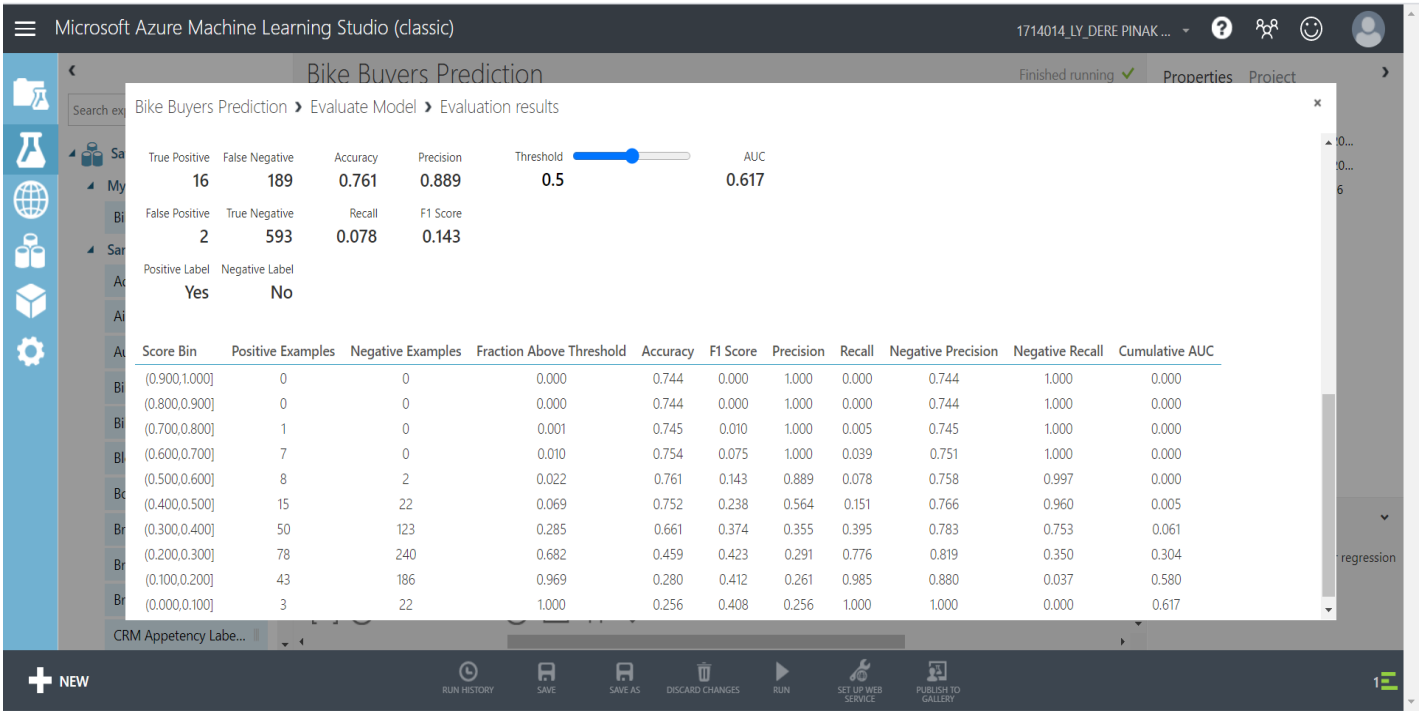
Add Evaluate Model to layout to evaluate the accuracy and precision of the model with respect to the results obtained.

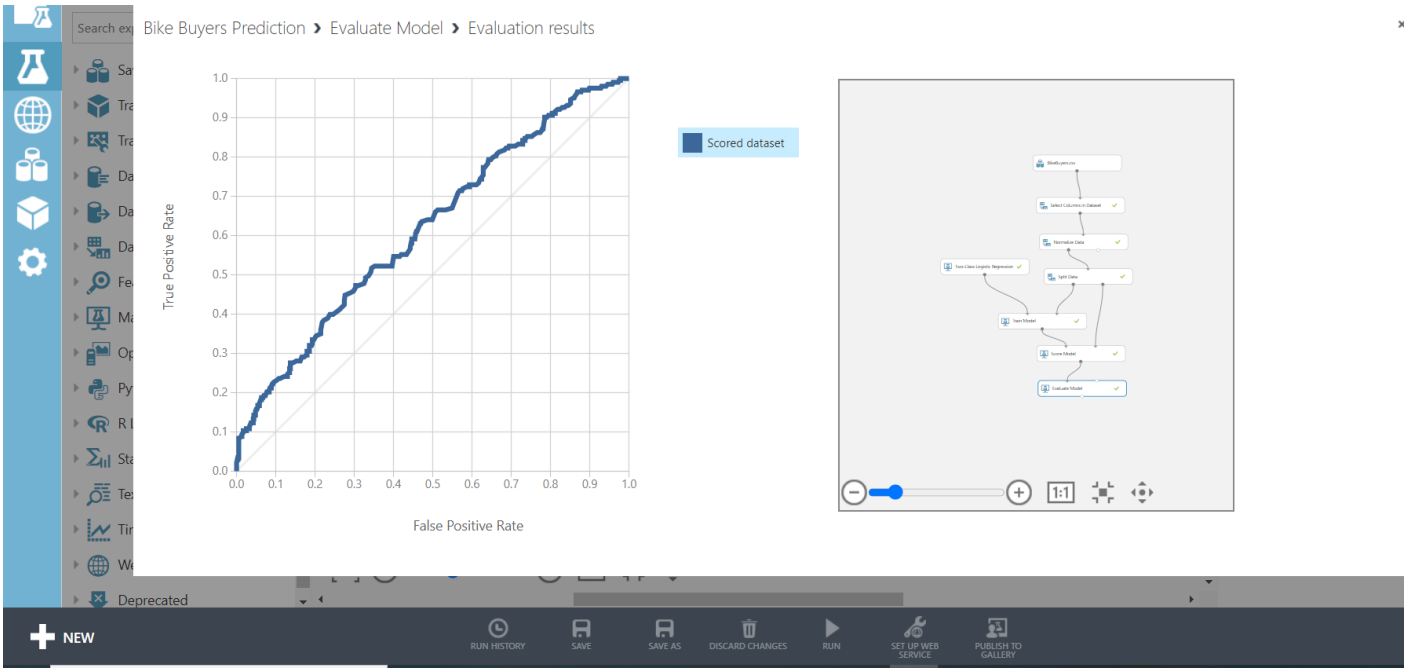


Check the weightage of the attributes for prediction. So, here the income and number of cars possessed are the two most important attributes for prediction of the outcome.



Visualize the Evaluate Model component to check out the results.





Questions:

Discuss the tangible and intangible benefits the business has observed after the implementation.

Ans:

- Increased the chances of high business revenue.
- Manpower got saved due to automation.
- This model can be used now anywhere in the enterprise.
- Lower expenditure.

Outcomes: Realize adequate perspectives of big data analytics in various applications.

Conclusion: (Conclusion to be based on the objectives and outcomes achieved)

Thus, I was able to train a model which predicts whether a customer is interested in purchasing a bike or not based on their age, income, gender, education, number of cars possessed and some other attributes using Azure ML Studio and then was able to publish it on GitHub:

https://github.com/Pinak1998/BikeBuyersPrediction

Link for the Azure Experiment:
https://gallery.azure.ai/Experiment/Bike-Buyers-Prediction-44

Grade: AA / AB / BB / BC / CC / CD /DD

Signature of faculty in-charge with date

References:

Books/ Journals/ Websites: