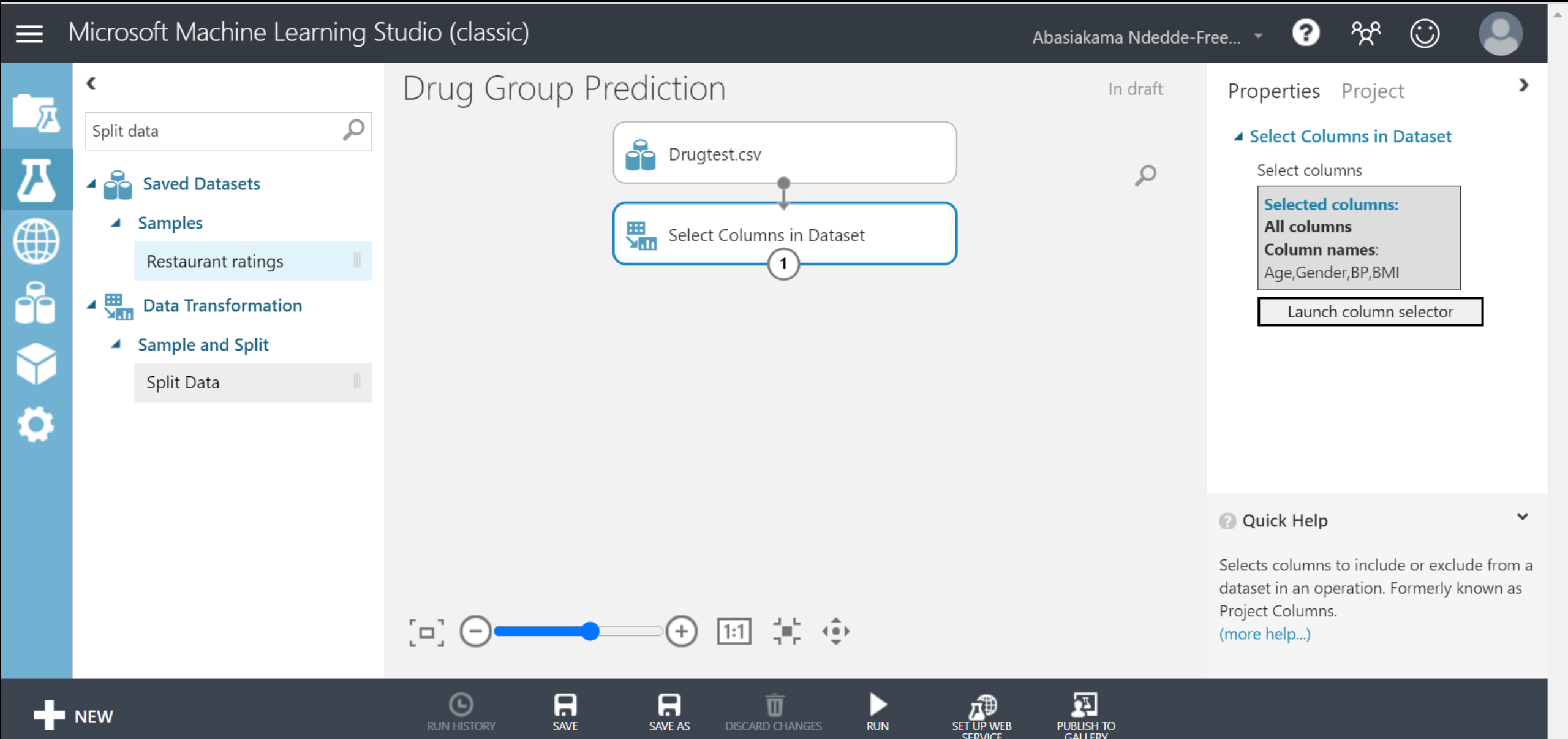
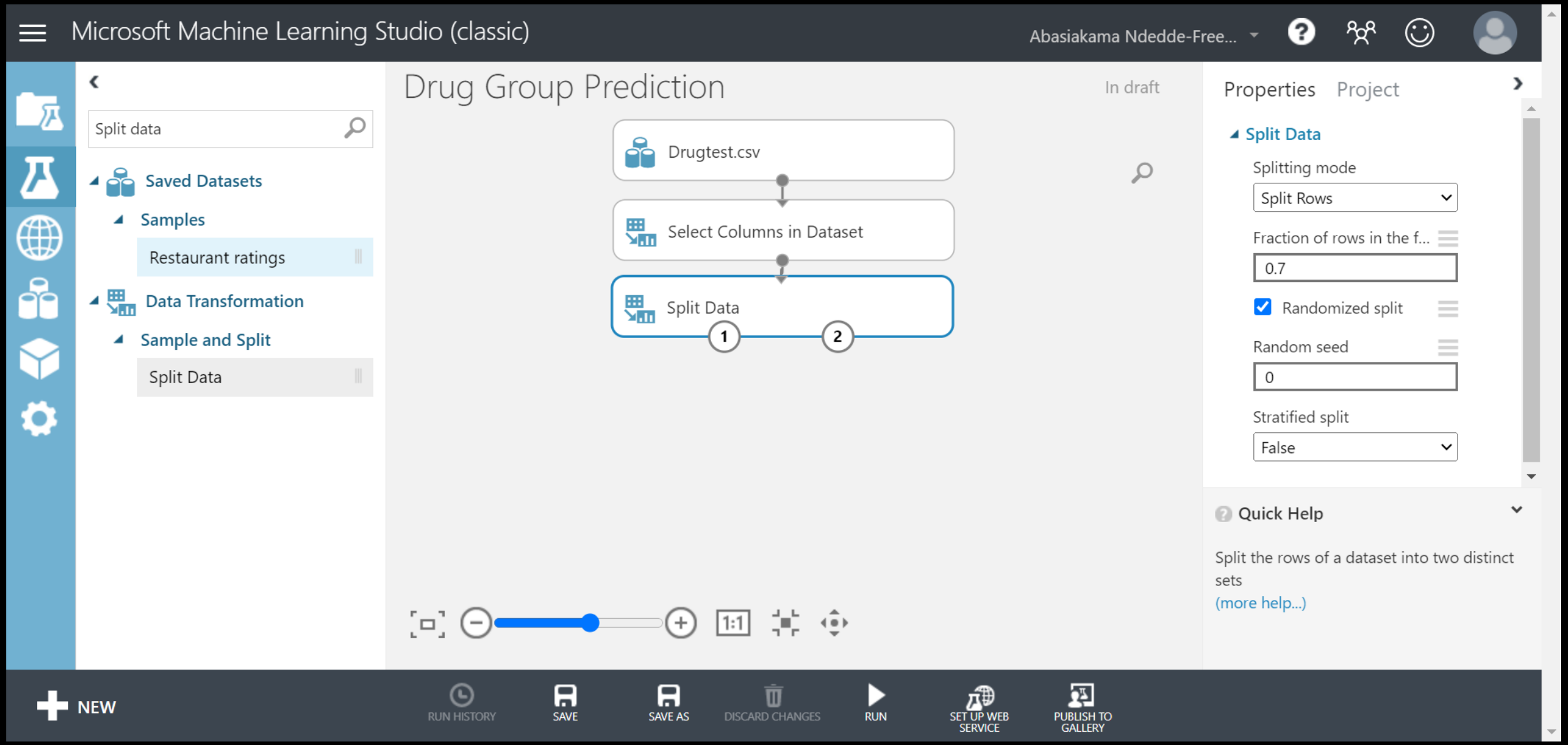
Machine Learning NanoProject

Abasiakama Zoe Ndedde

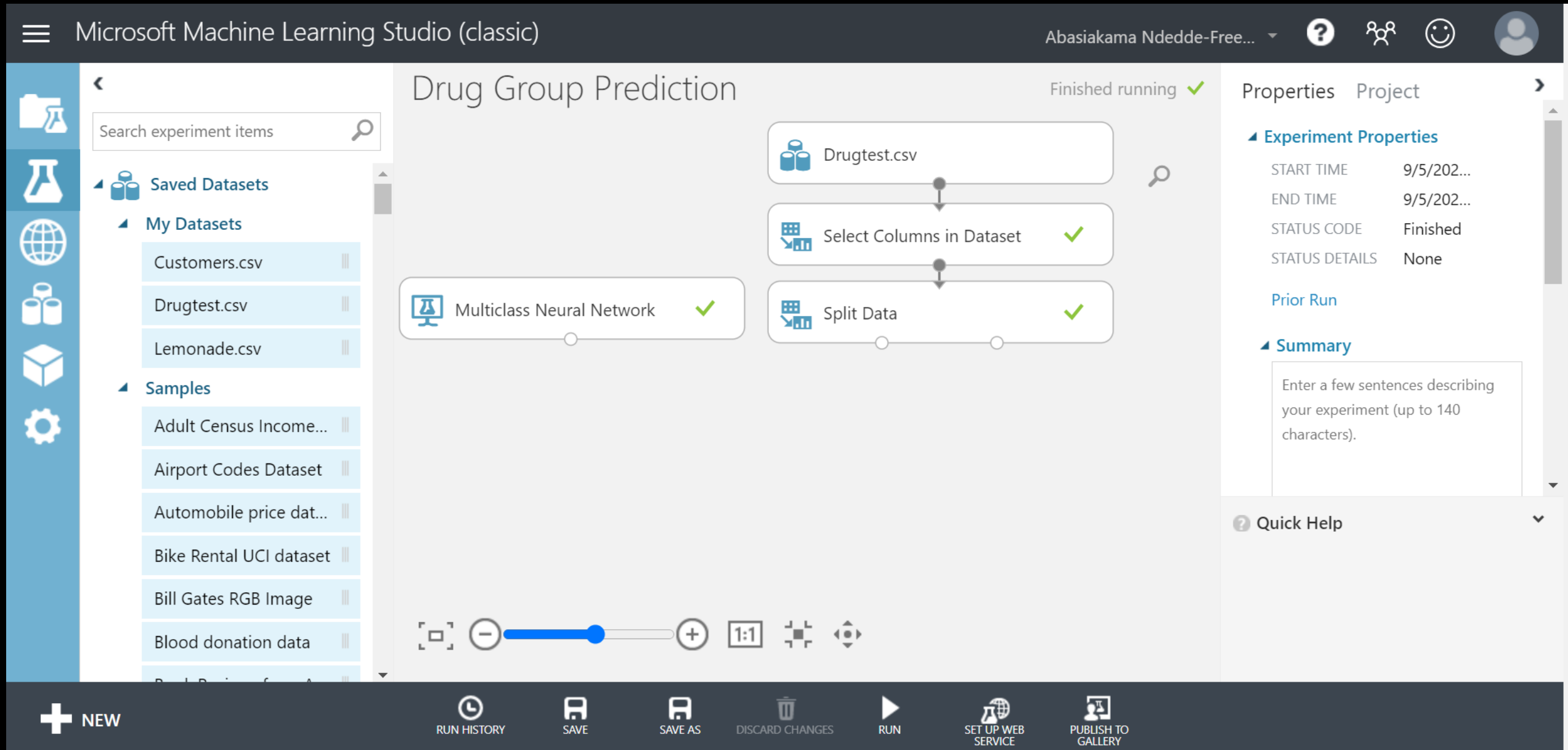
DATA EXPLORATION: I started by importing the Drugtest.csv dataset into Microsoft Machine Learning Studio and selecting Age,Gender,Bp and BMI as the columns needed.



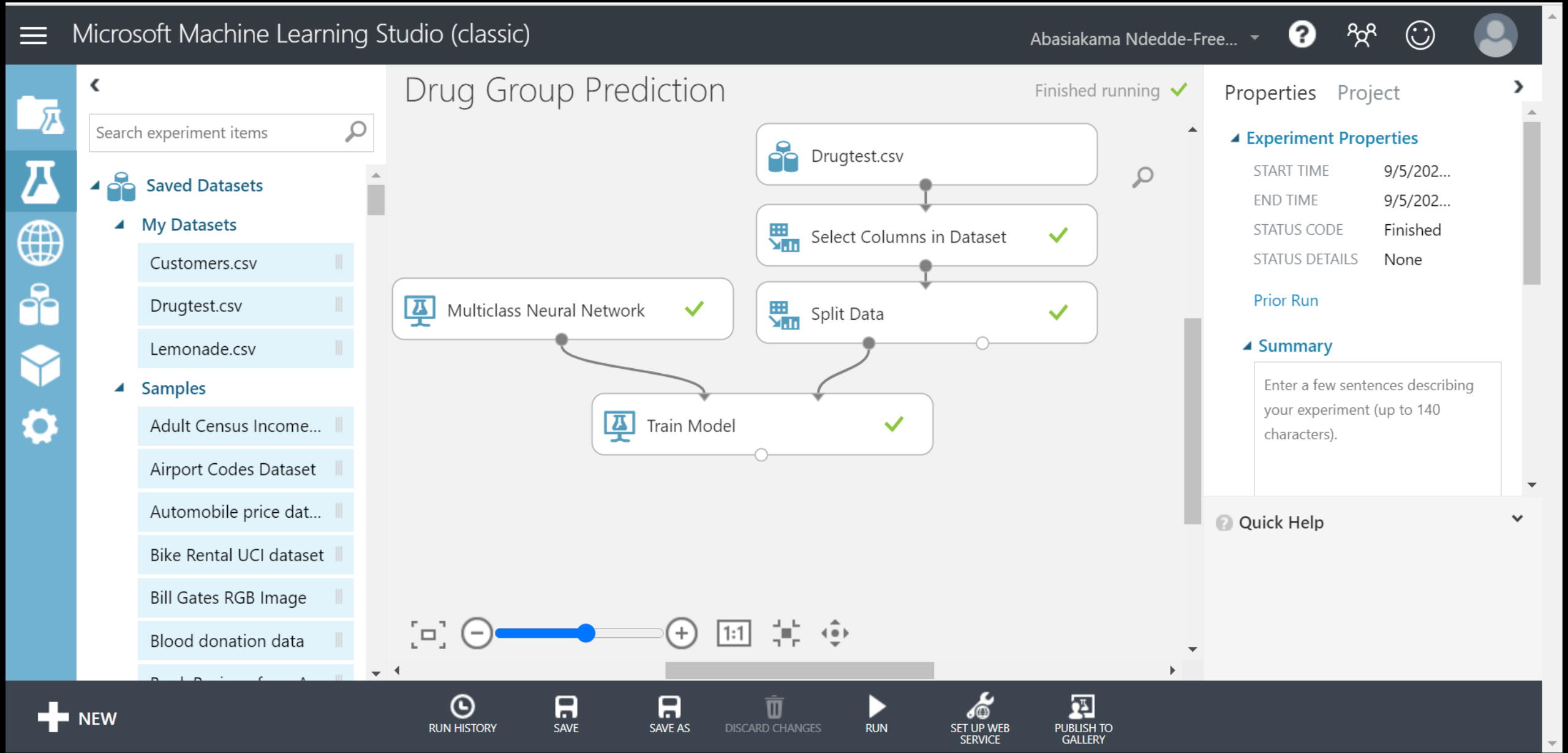
SPLIT DATASET: I split the dataset into training and testing sets. The training set is used to train the machine learning model, while the testing set is used to evaluate its performance on unseen data. I typically use a 70-30 or 80-20 ratio for the training and testing split.



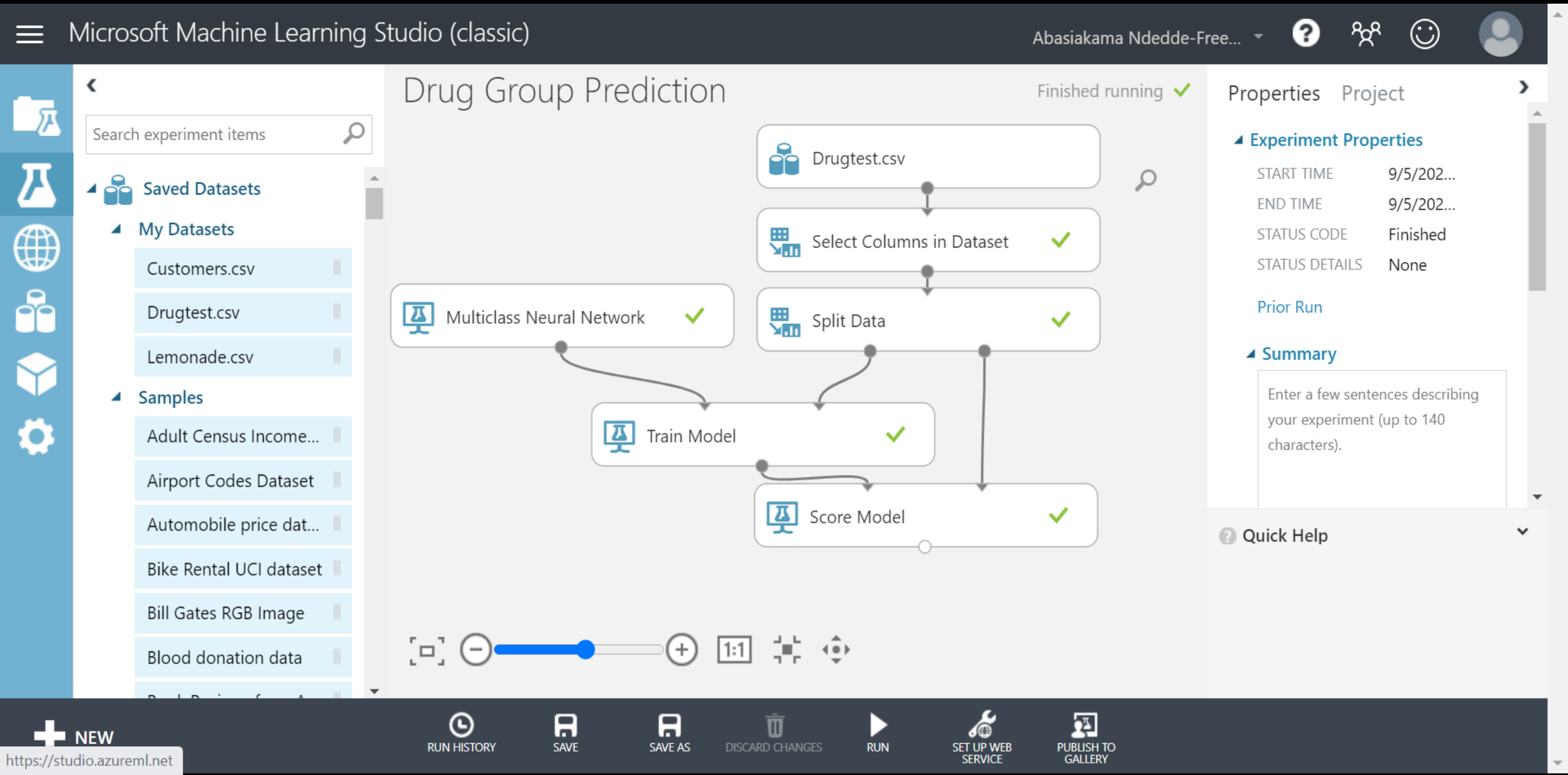
MODEL SELECTION: Based on the nature of the prediction task and the available dataset, I selected Multiclass Neural Network an appropriate machine learning algorithm for building the model. The selection is based on factors like interpretability, accuracy, and the size of the dataset.



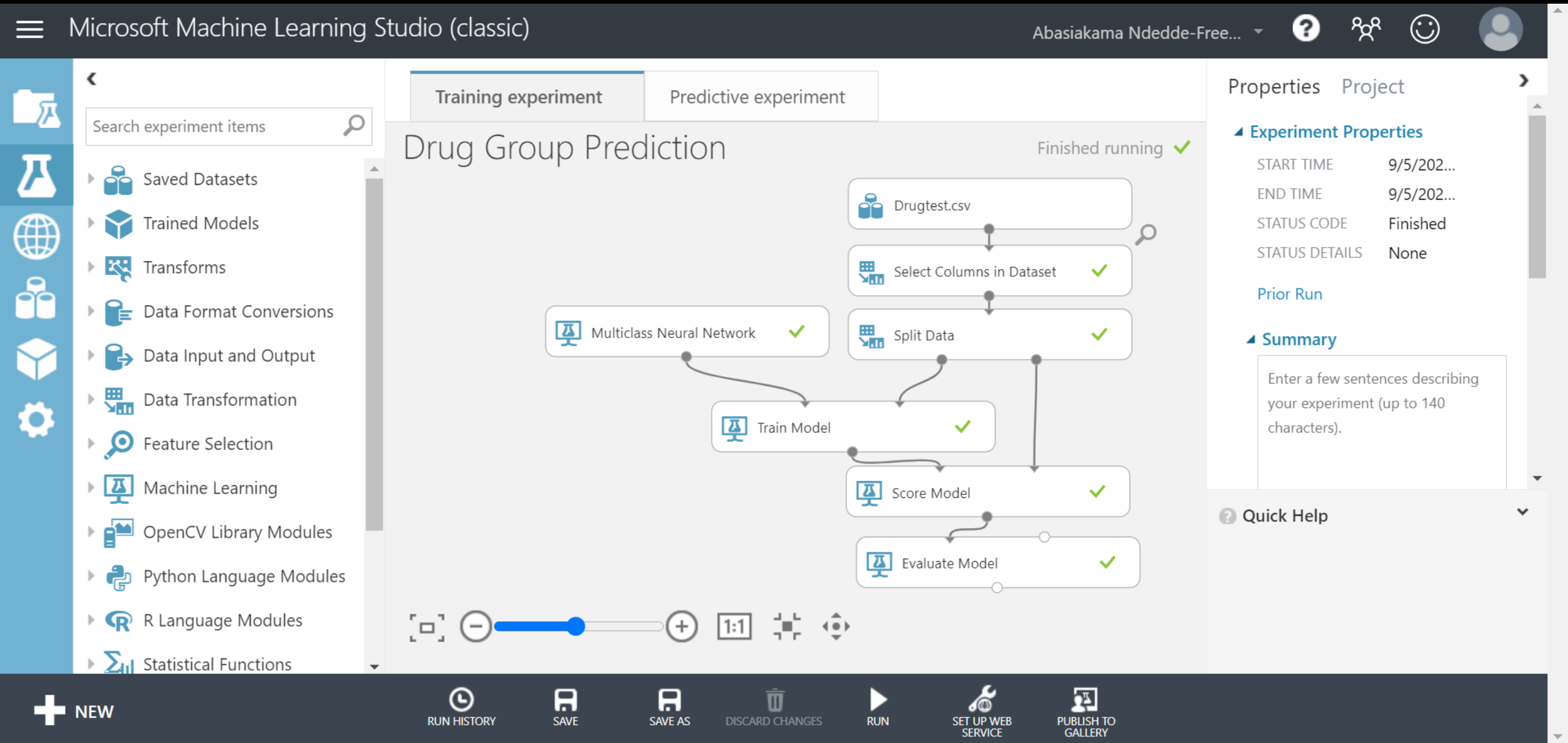
TRAIN MODEL: A trained model in machine learning is used to make predictions or classifications based on input data, allowing it to generalize patterns and provide valuable insights or automated decisions.



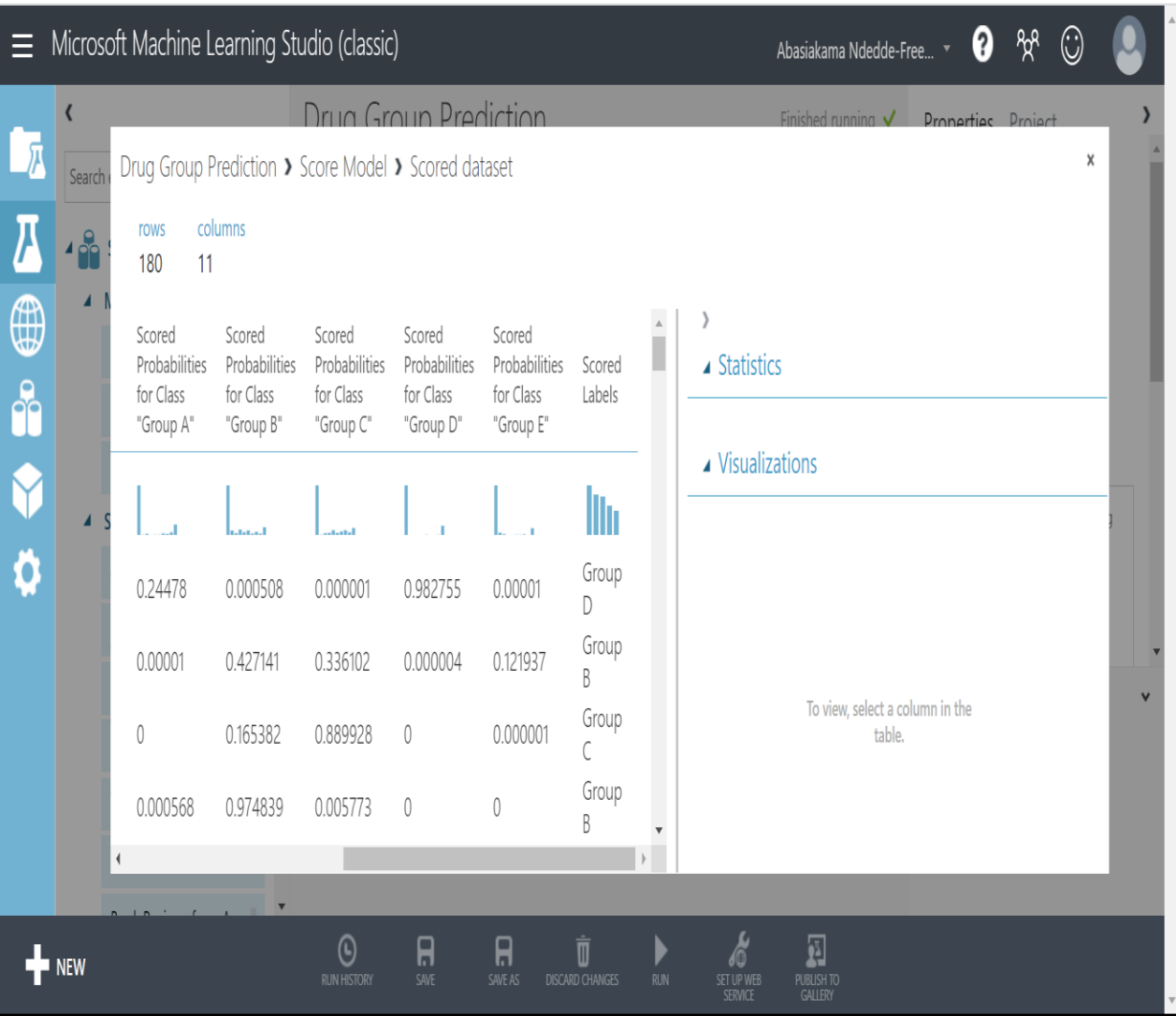
SCORE MODEL: I Score the model to evaluate its performance and assess how well it predicts or classifies data, typically using metrics like accuracy, precision, recall, or F1-score. This helps gauge the model's effectiveness and suitability for a given task.

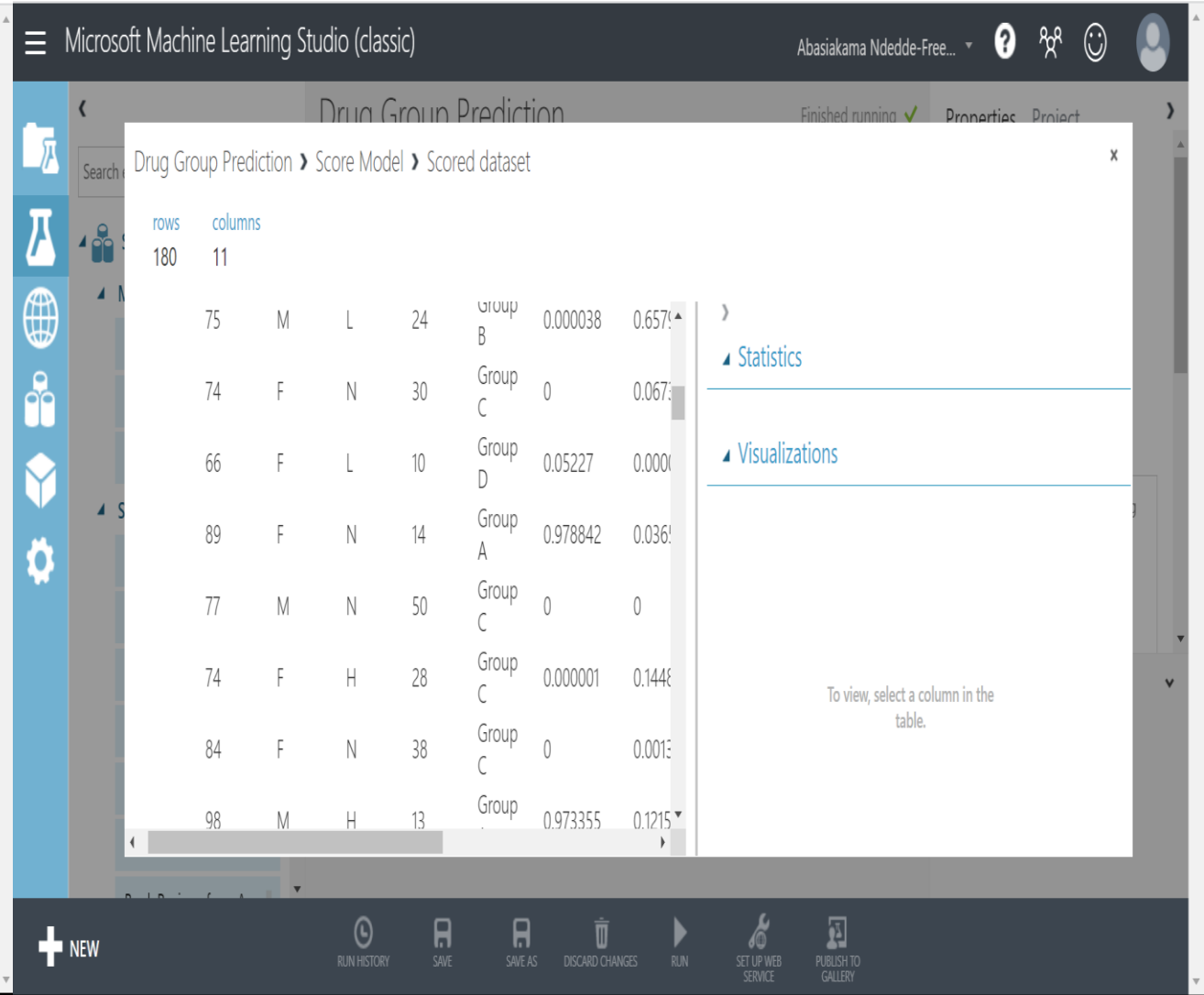


EVALUATE MODEL: I Evaluated the model to assess its performance and generalization ability on unseen data and determine its effectiveness, reliability, and whether it meets the desired objectives or criteria.

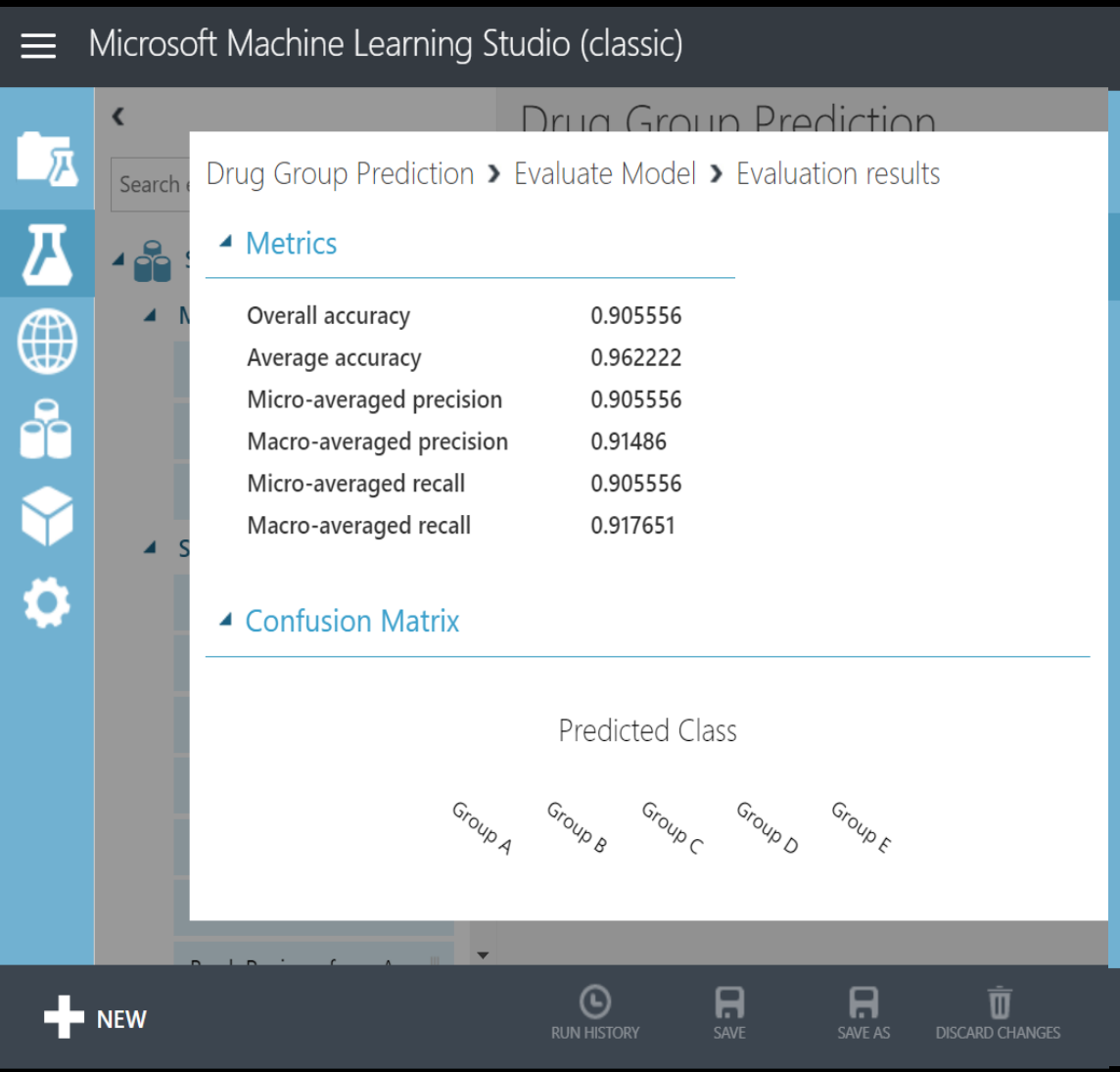


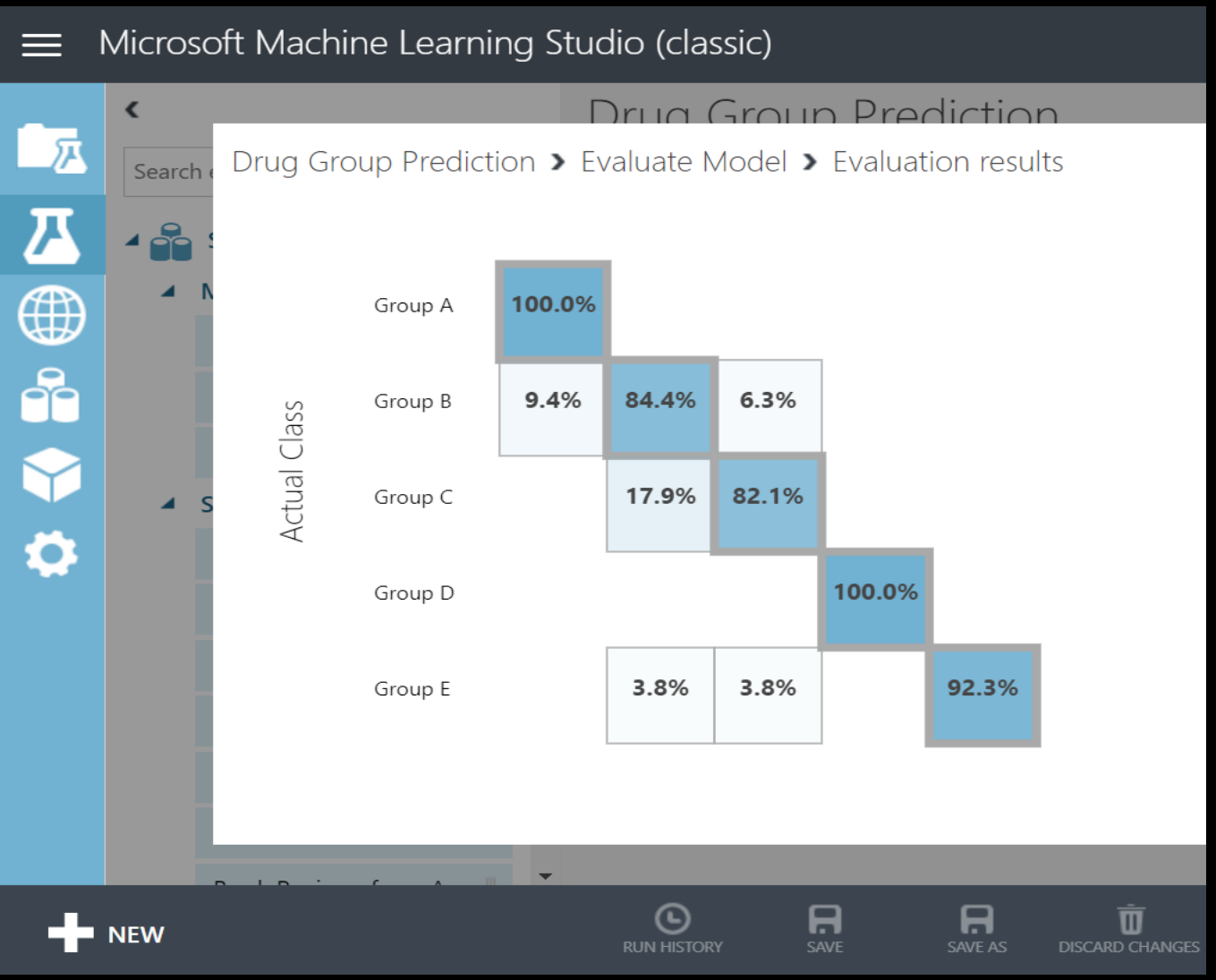
Here are results from visualizing the data under score model.



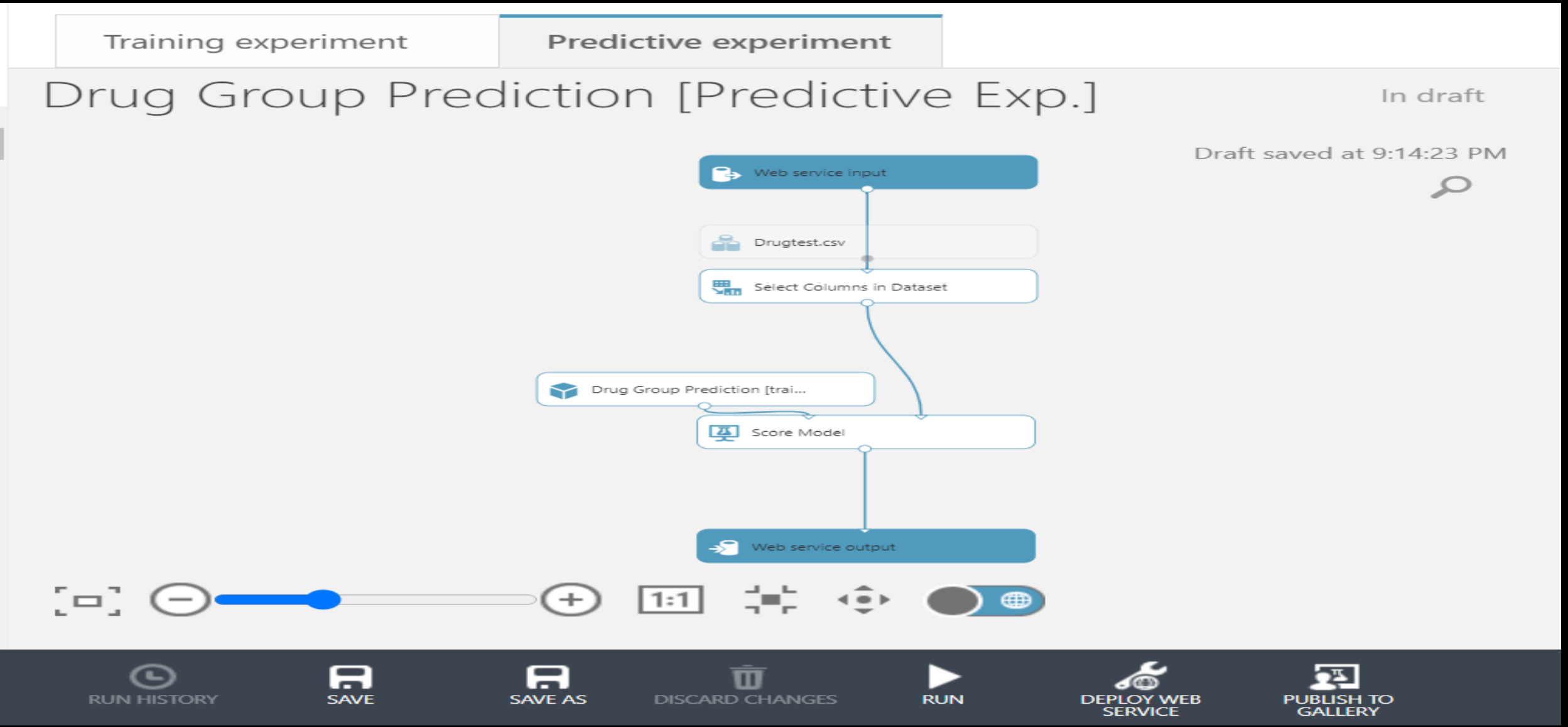


Here are results from visualizing the data under evaluate model.

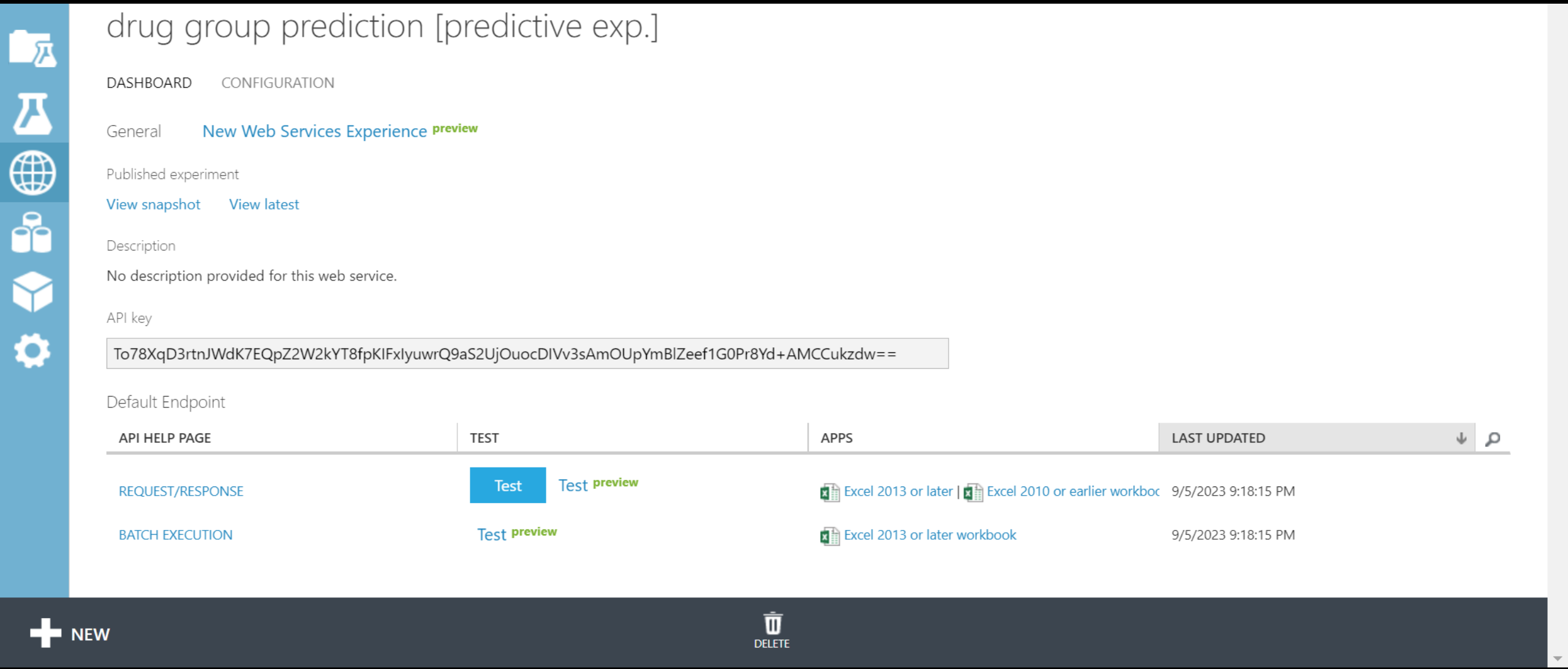




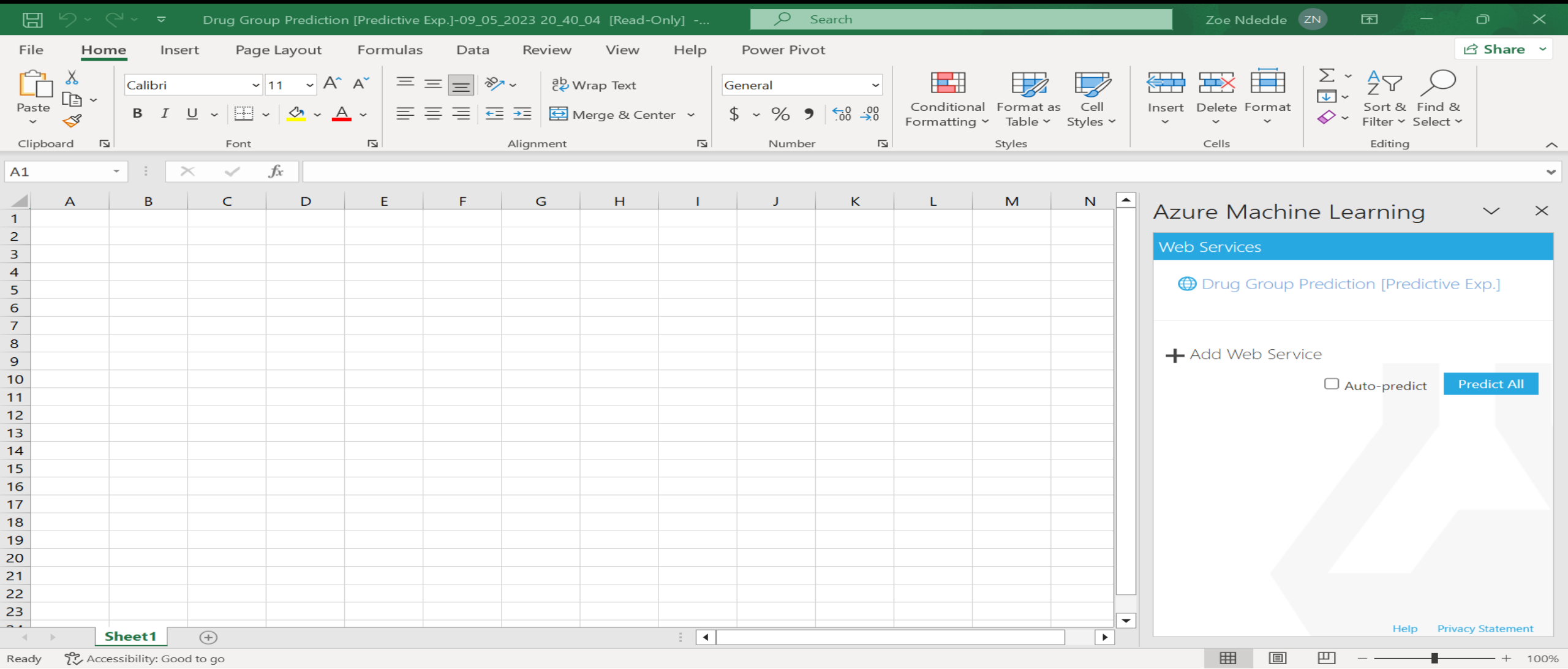
MODEL DEPLOYMENT: Once I achieved a satisfactory performance, I deployed the model to make predictions on new, unseen data. This step involves creating an interface or integrating the model into an existing system for practical usage. It ensures the model is accessible and can be utilized for real-time predictions.



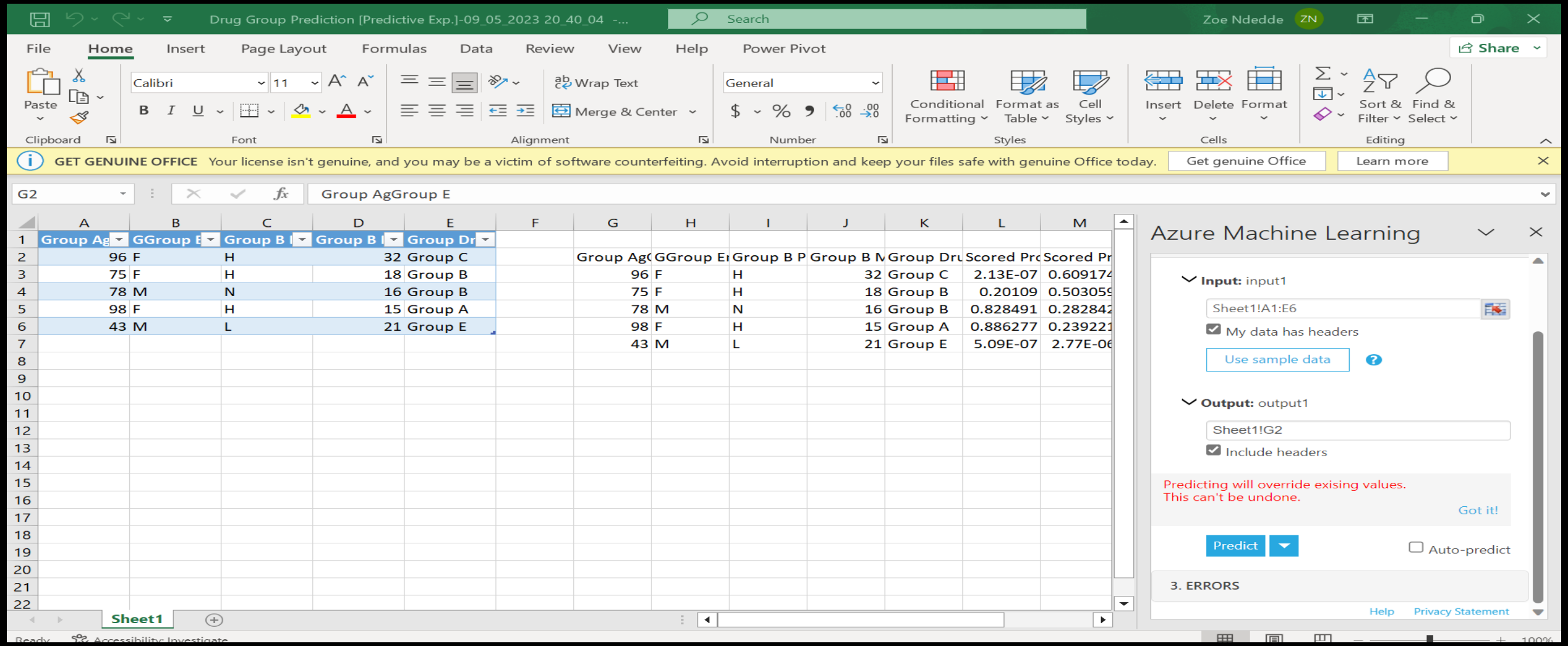
I downloaded the first excel database.



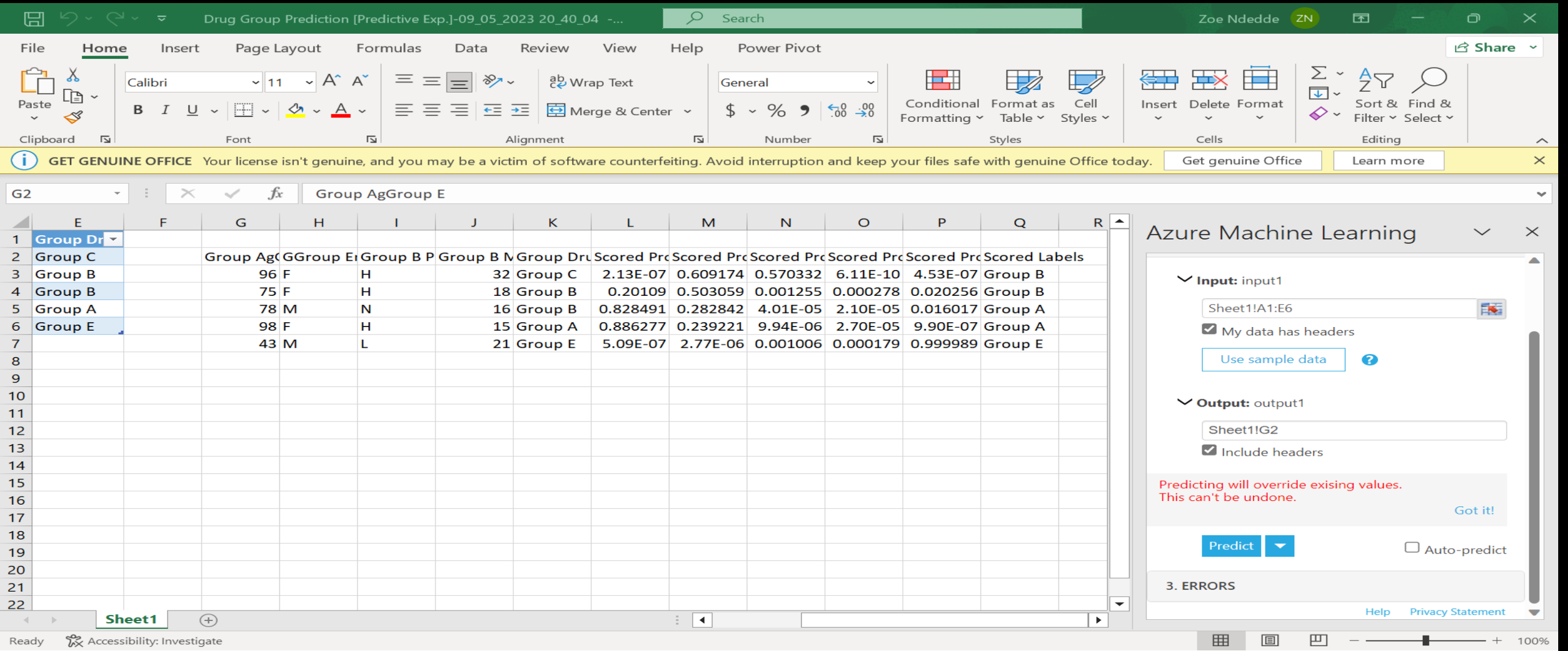
I clicked on the “Drug group prediction” link



FINAL OUTPUT



FINAL OUTPUT



	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Group Dr													
2	Group C		Group Ag	GGroup E	Group B P	Group B M	Group Dru	Scored Pro	Scored Pro	Scored Pro	Scored Pro	Scored Pro	Scored Labels	
3	Group B		96	F	H	32	Group C	2.13E-07	0.609174	0.570332	6.11E-10	4.53E-07	Group B	
4	Group B		75	F	H	18	Group B	0.20109	0.503059	0.001255	0.000278	0.020256	Group B	
5	Group A		78	M	N	16	Group B	0.828491	0.282842	4.01E-05	2.10E-05	0.016017	Group A	
6	Group E		98	F	H	15	Group A	0.886277	0.239221	9.94E-06	2.70E-05	9.90E-07	Group A	
7			43	M	L	21	Group E	5.09E-07	2.77E-06	0.001006	0.000179	0.999989	Group E	
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														