Database Management Systems

Lecture 6

Azure Machine Learning*

Azure Stream Analytics*

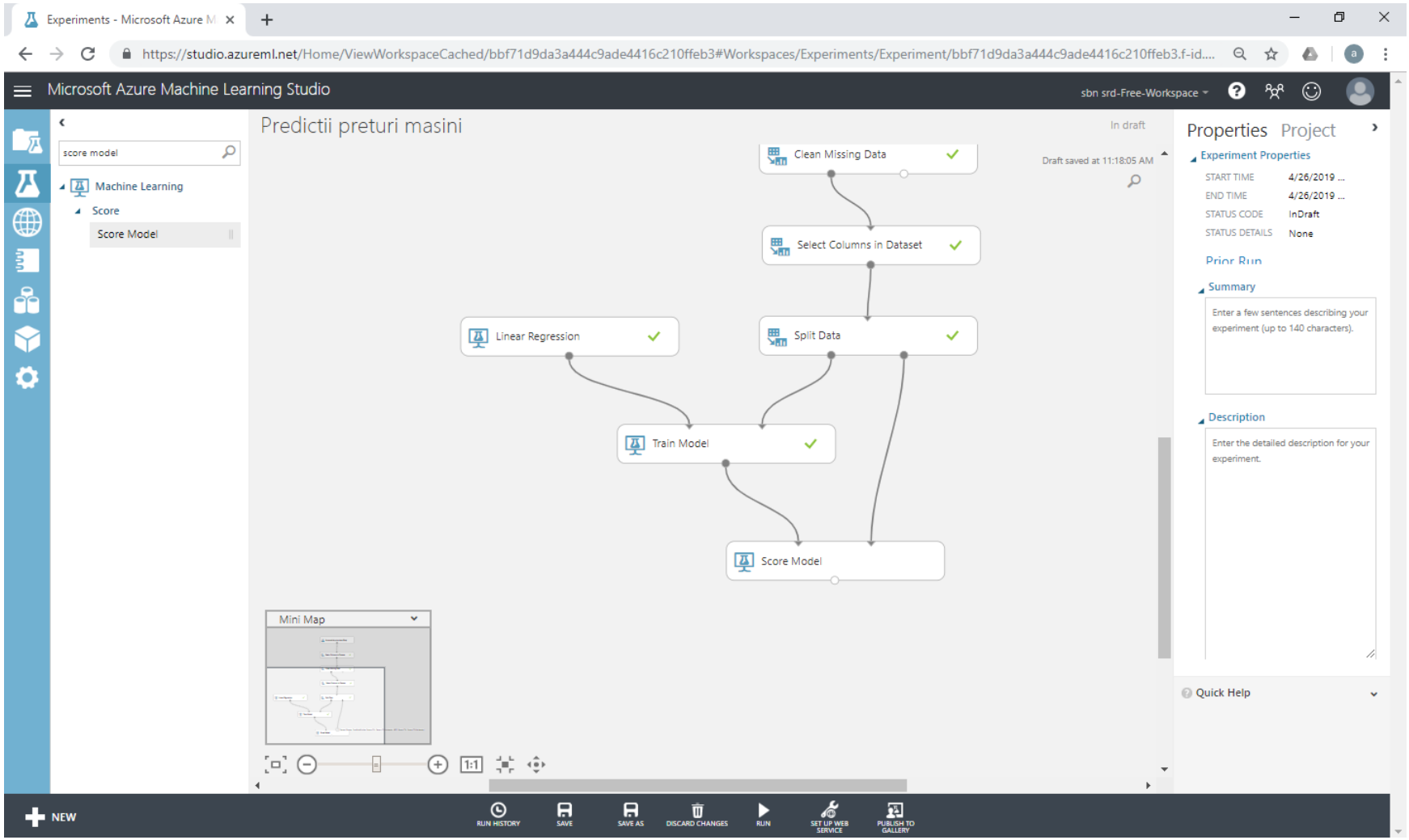
* not among the exam topics

Azure Machine Learning

Car Price Prediction

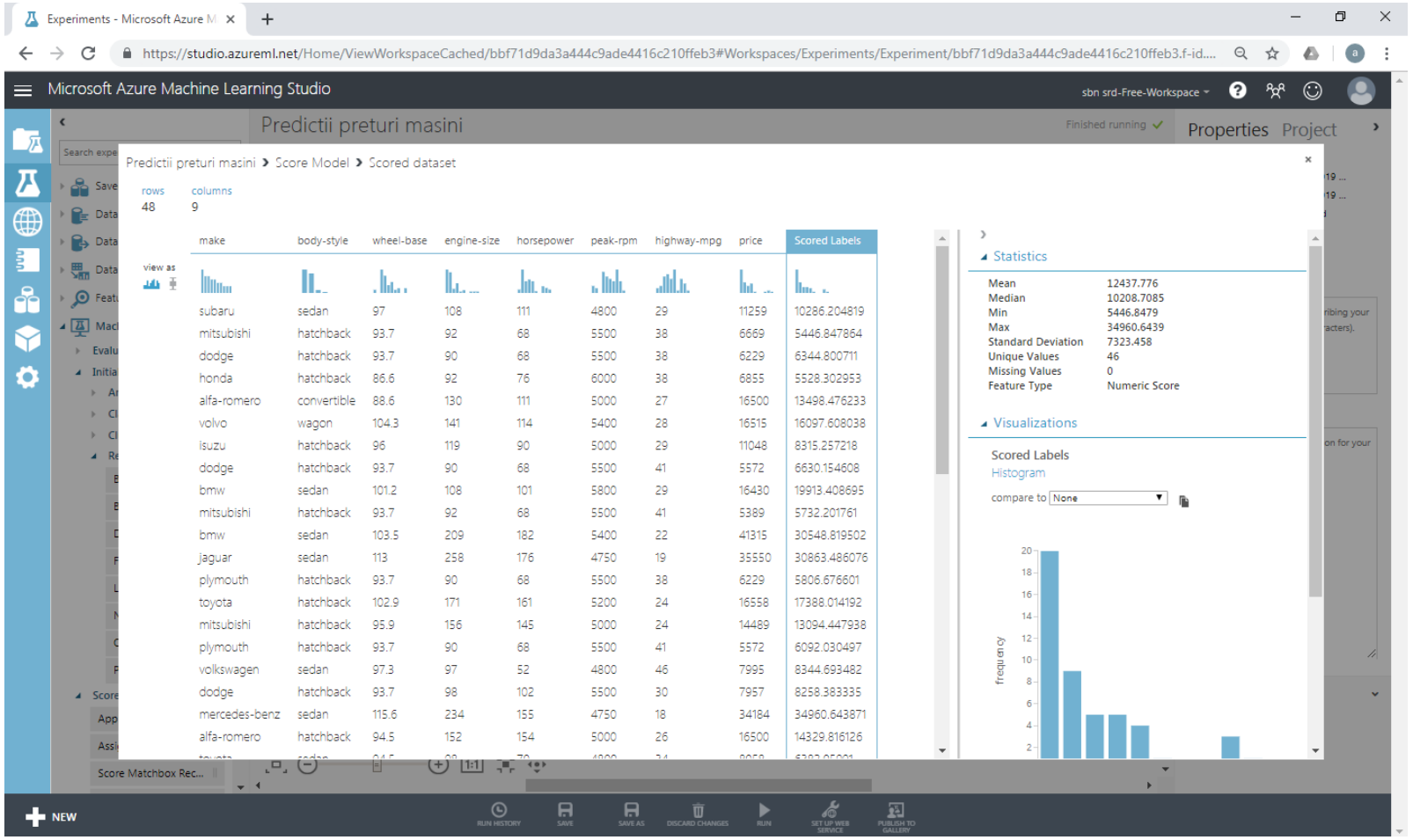
* testing the model - *Score Model* module

- *Run* experiment



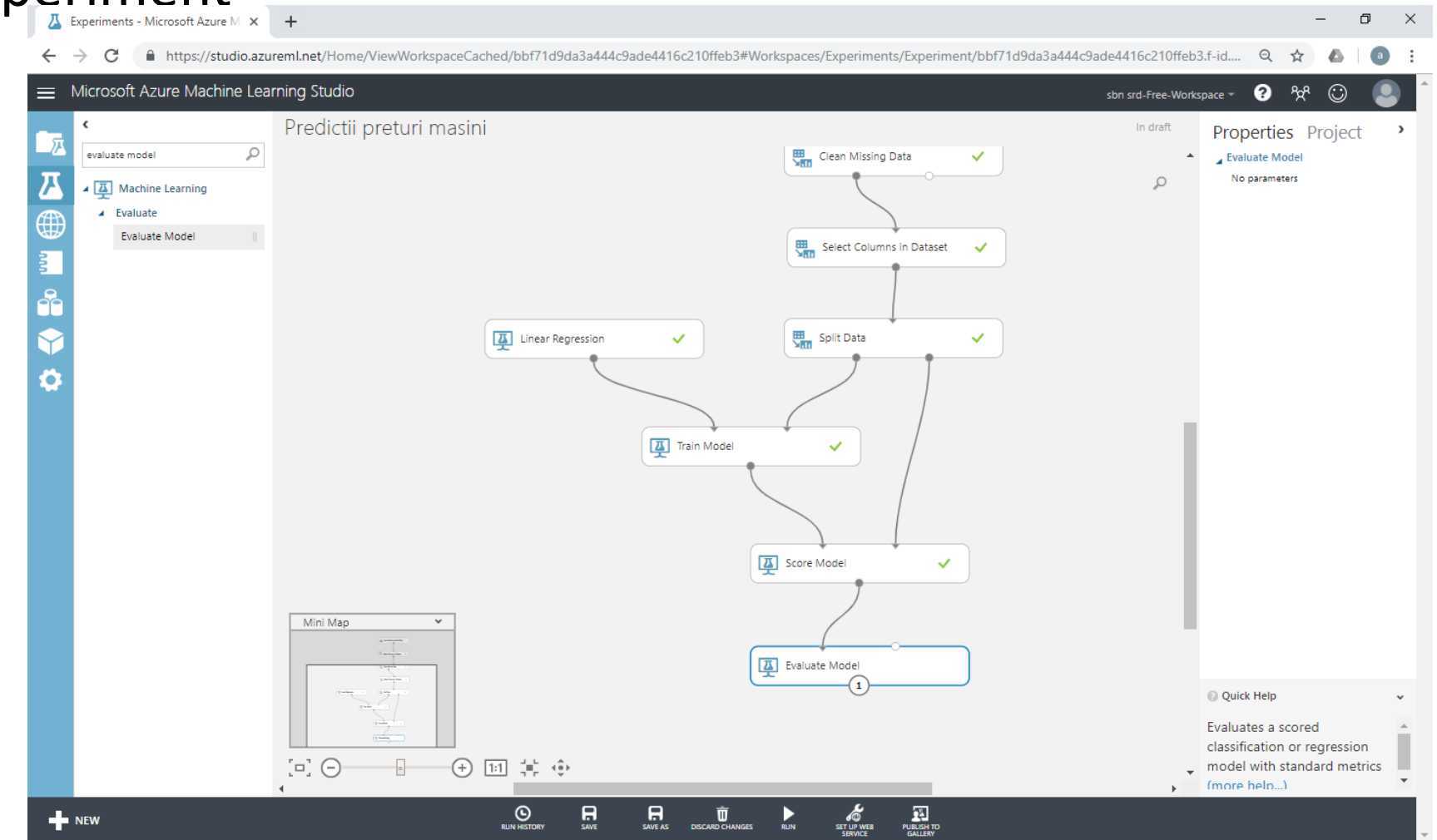
Car Price Prediction

* testing the model
  - *Score Model* output port-> *Visualize*
    - estimated / actual values for the *price* column



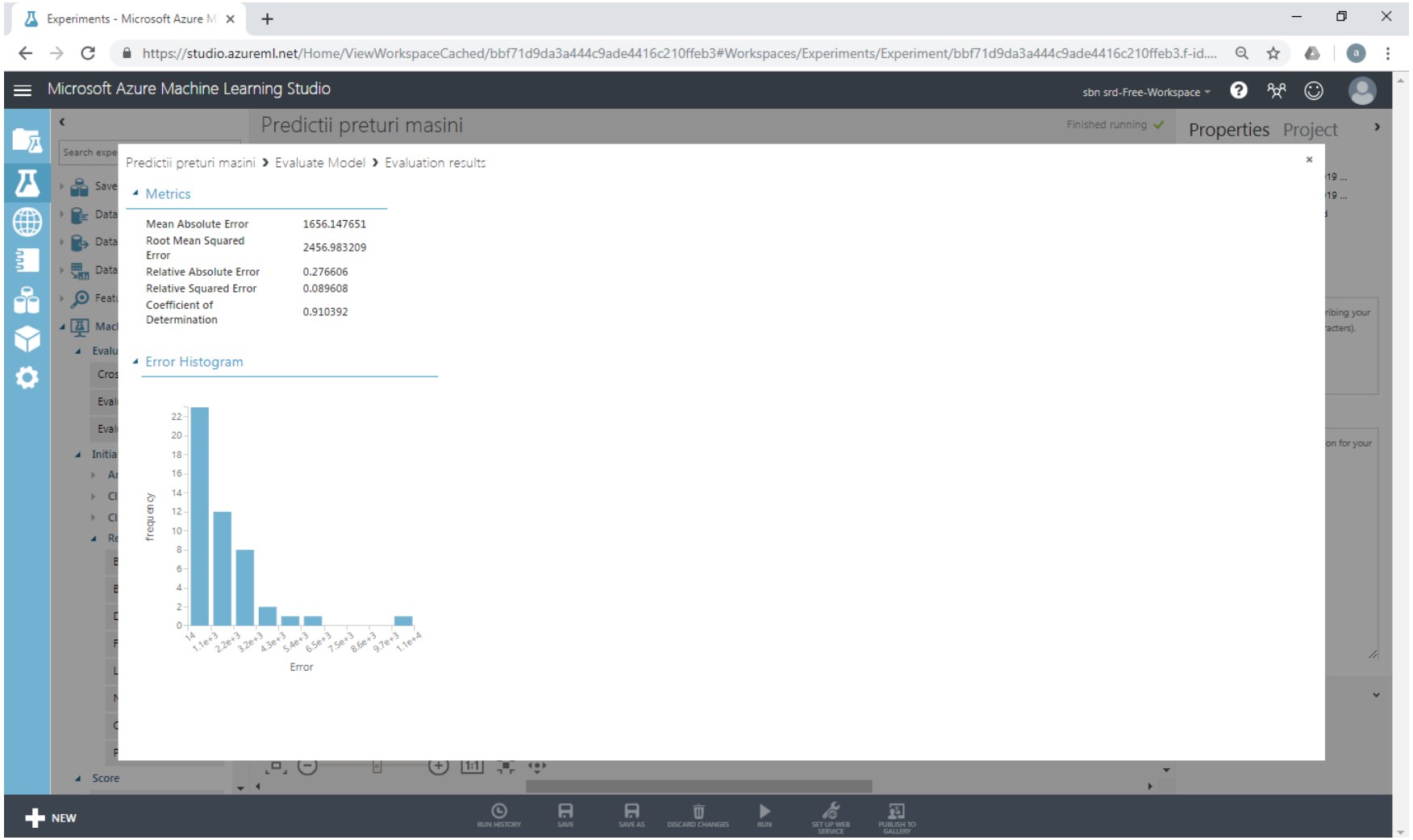
Car Price Prediction

* testing the model
  - *Evaluate Model* module
  - *Run* experiment



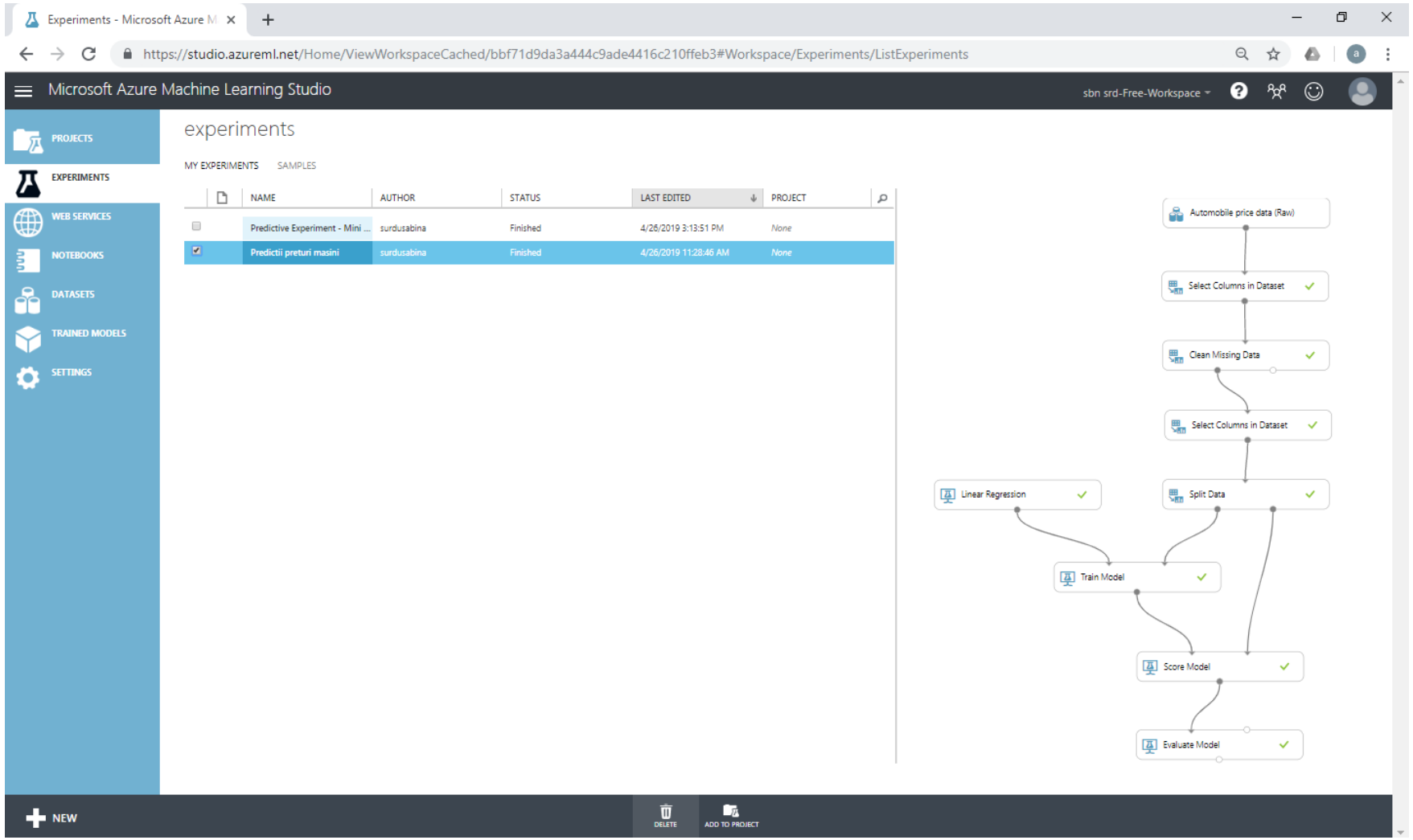
Car Price Prediction

* testing the model
  - *Evaluate Model* output port -> *Visualize*



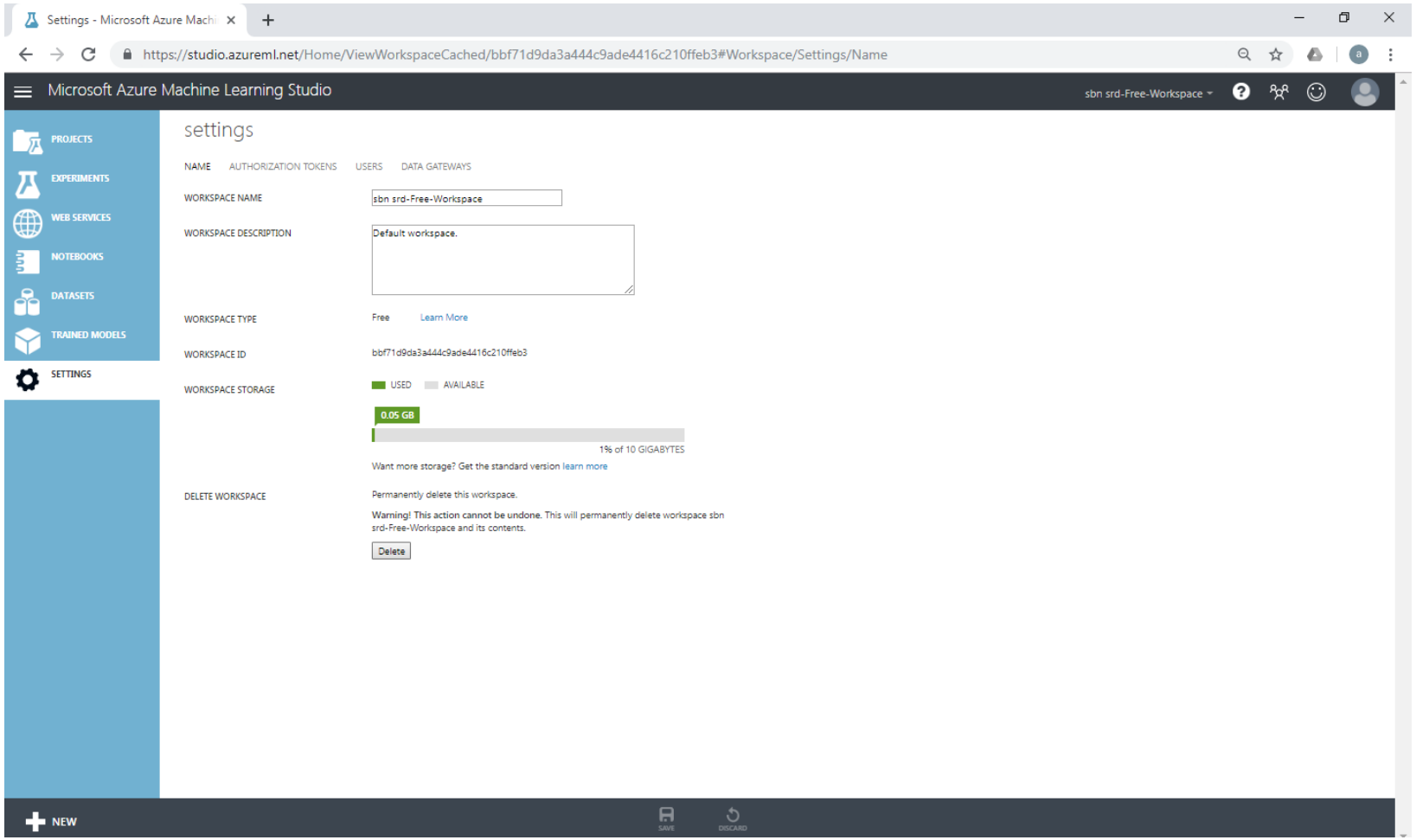
Car Price Prediction

* eliminate resources



Car Price Prediction

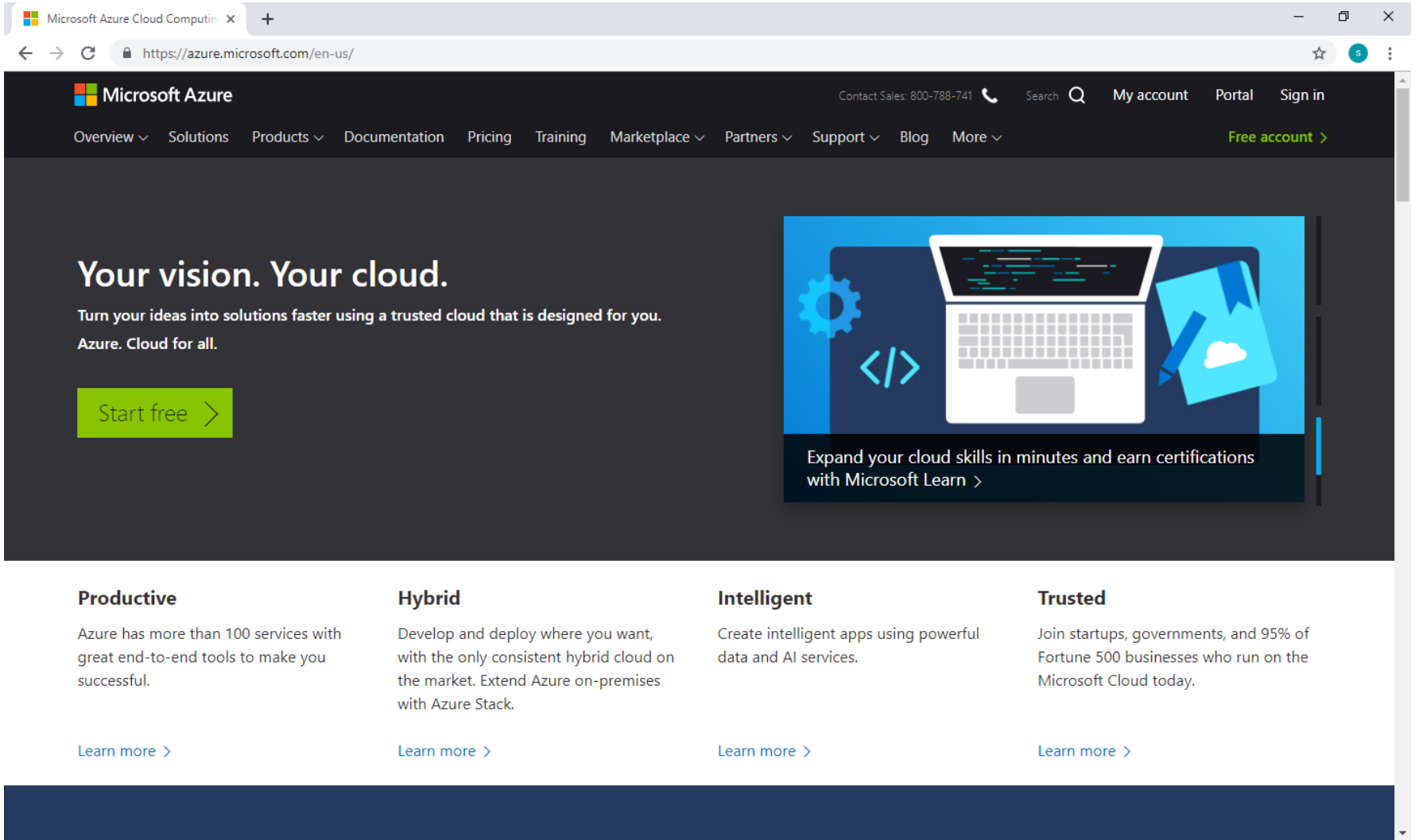
* eliminate resources
  - delete workspace: *Settings -> Delete*



Sentiment Analysis
Azure Machine Learning and Azure Stream Analytics

Azure Account – Azure for Students

- Azure portal
  - https://portal.azure.com/#home

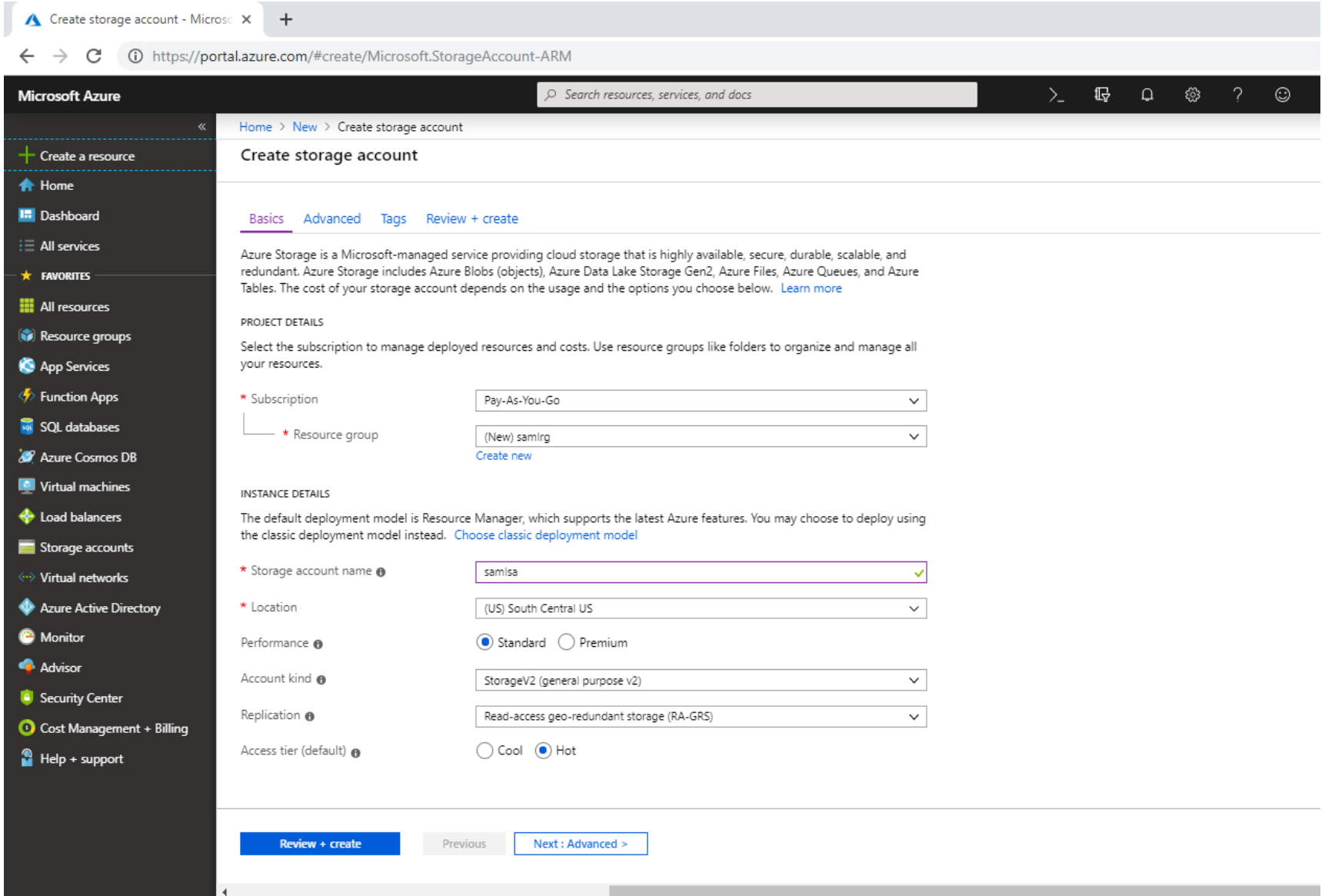


Sentiment Analysis: Azure Stream Analytics + Azure ML

- input
  - .csv file with tweets in Blob storage
- deploy sentiment analytics model as a web service
- create job
  - input – .csv file with tweets in Blob storage
  - output – another .csv file (same Blob storage)
    - for each tweet t – store the sentiment of t (*positive, neutral* or *negative*) and the probability that t is positive
  - Azure Machine Learning function – call web service as a function on each input tweet

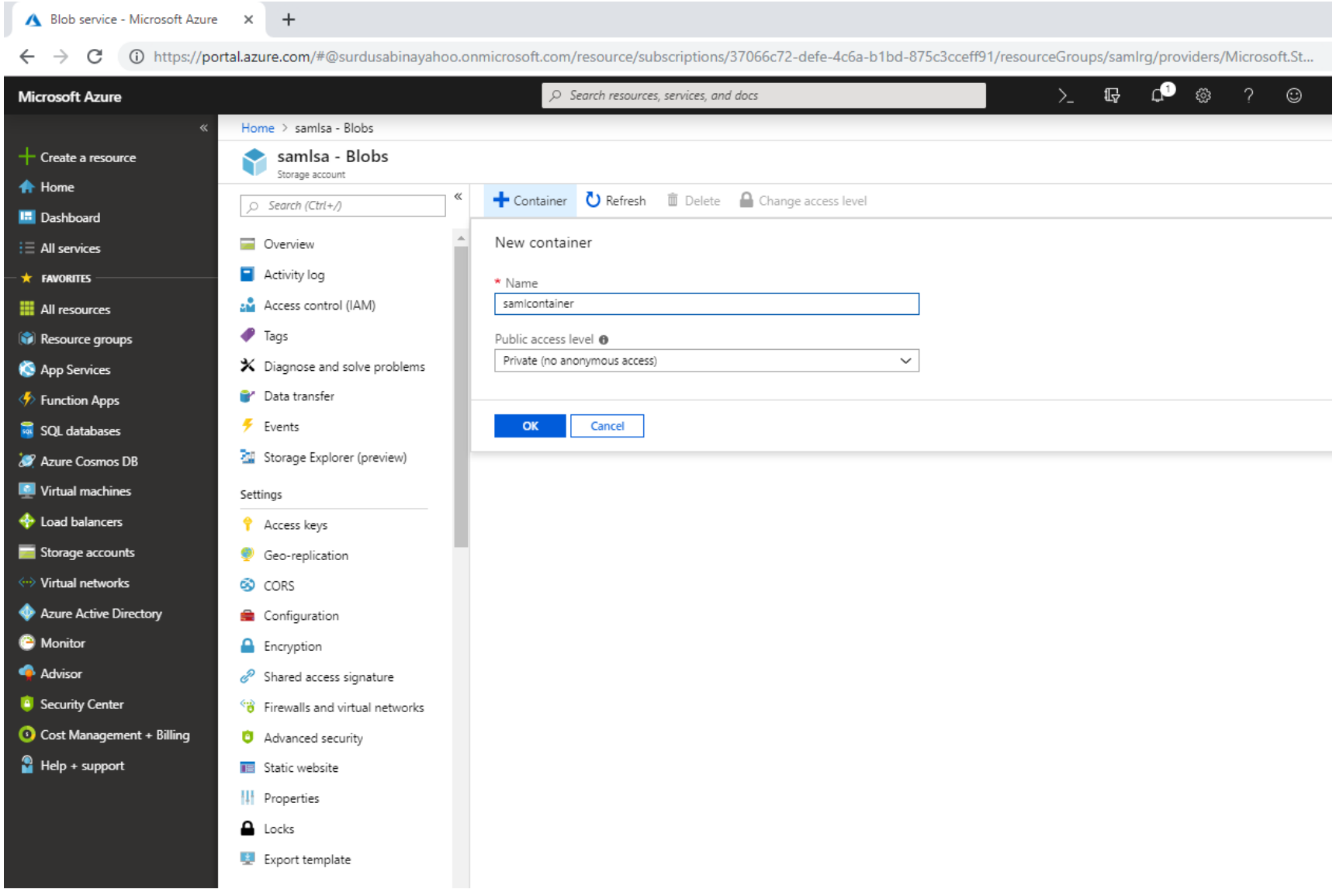
Input

** Create a resource -> Storage -> Storage account*



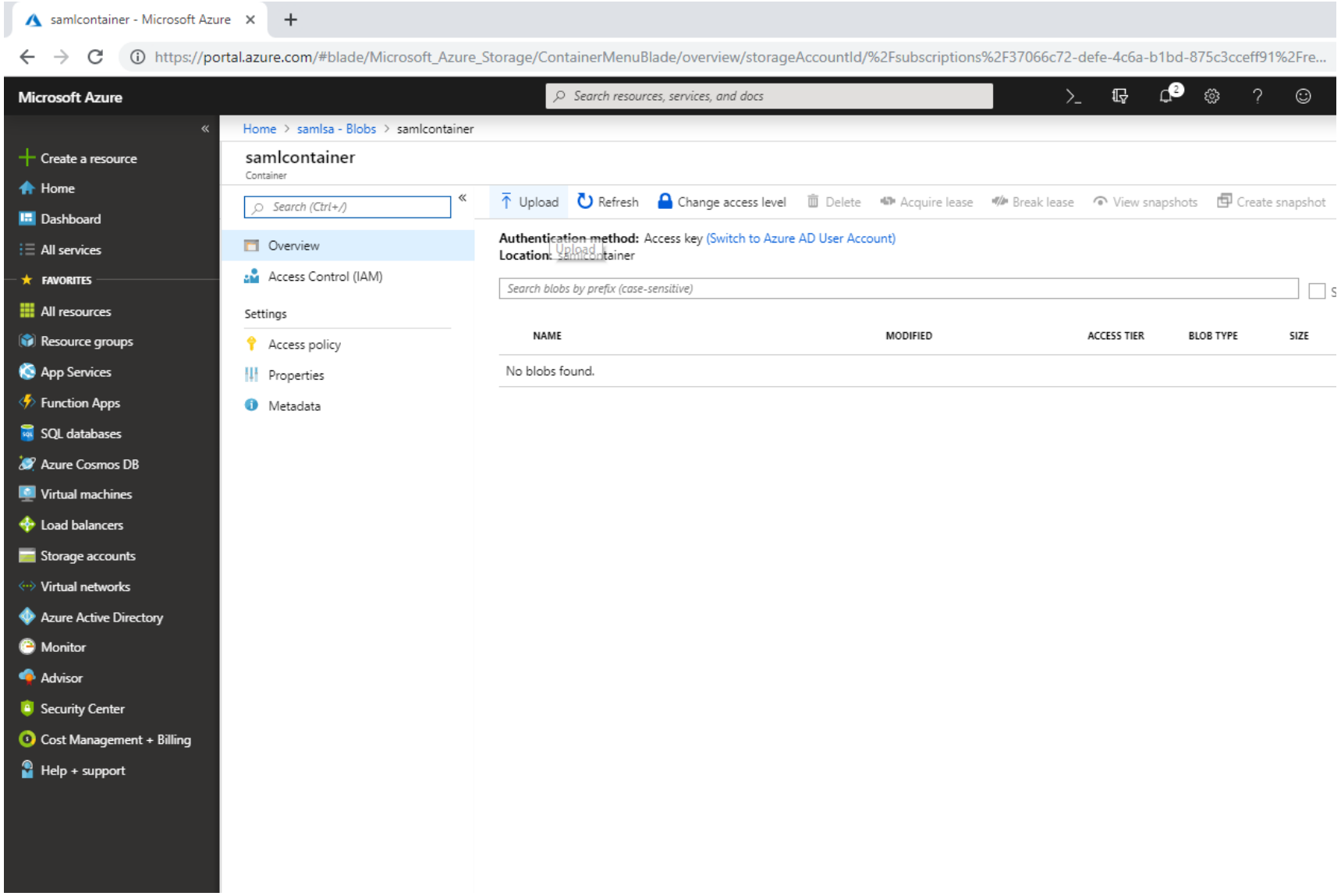
Input

* load file -> *Storage account -> Containers -> + Container*



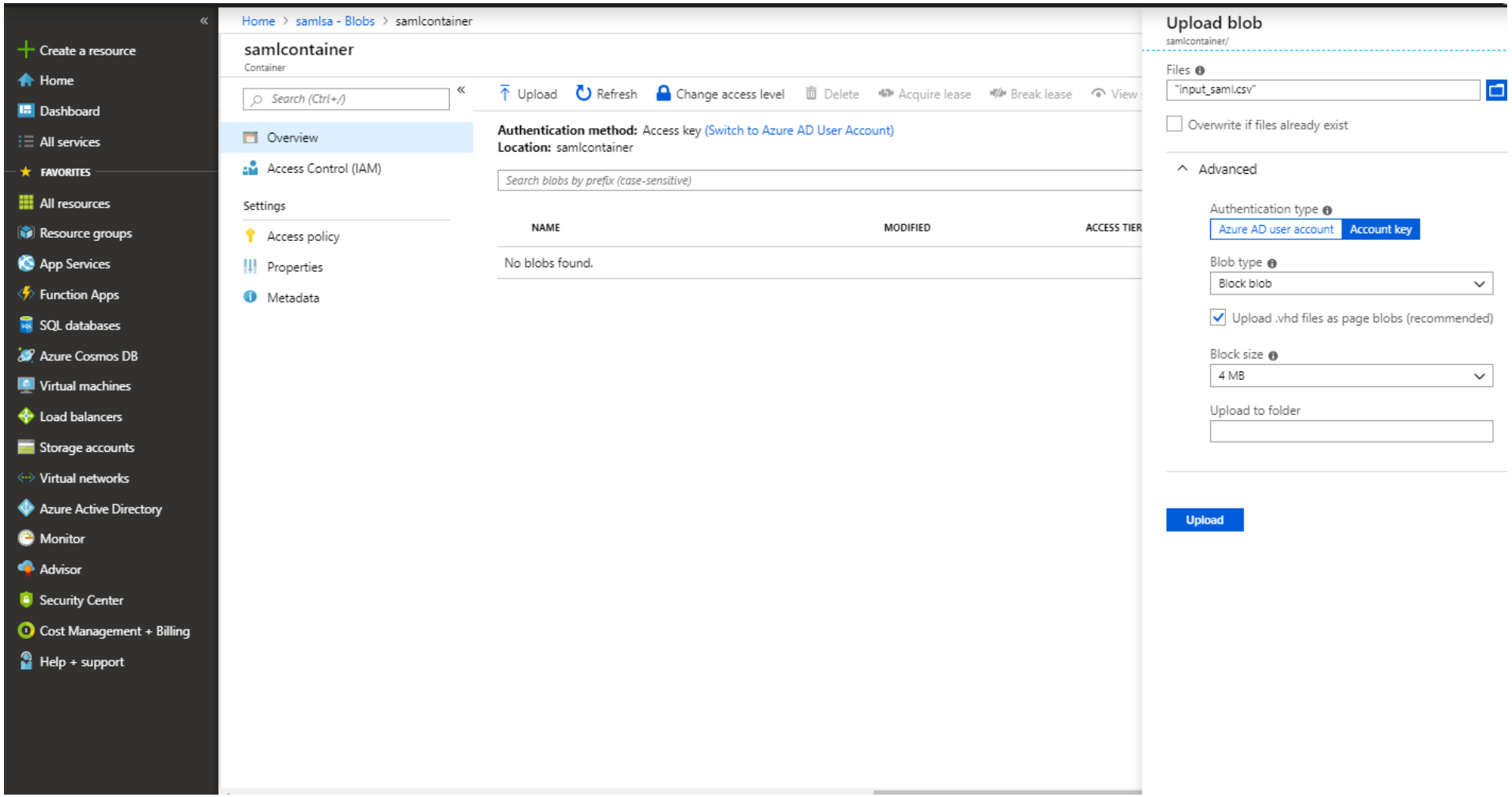
Input

* load file -> *container -> Upload*



Input

* load file -> choose file -> *Upload*



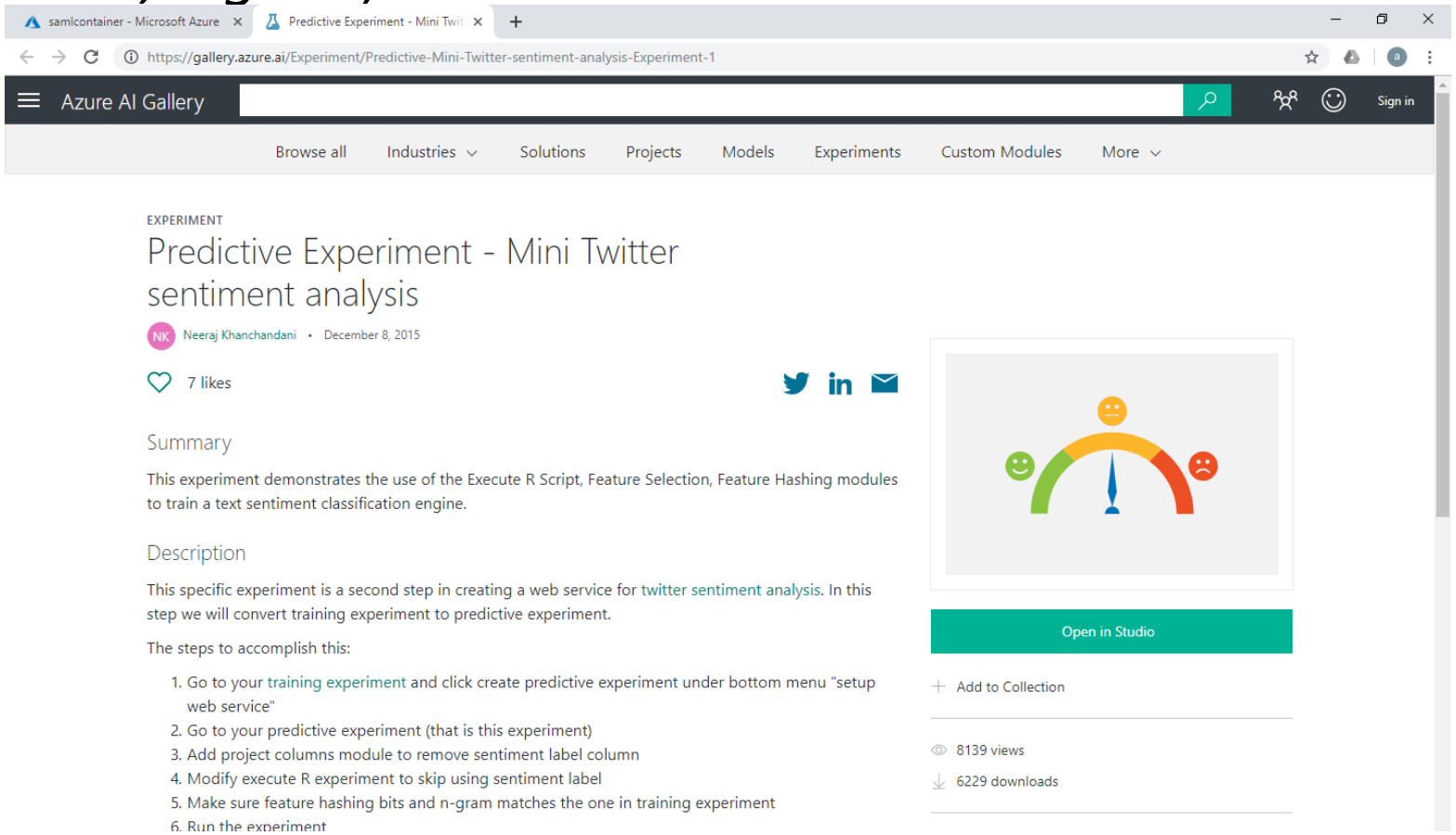
Input

* input_saml.csv

Text
They love ice cream
The sky is blue
Machine Learning is cool
Machine Learning is not cool

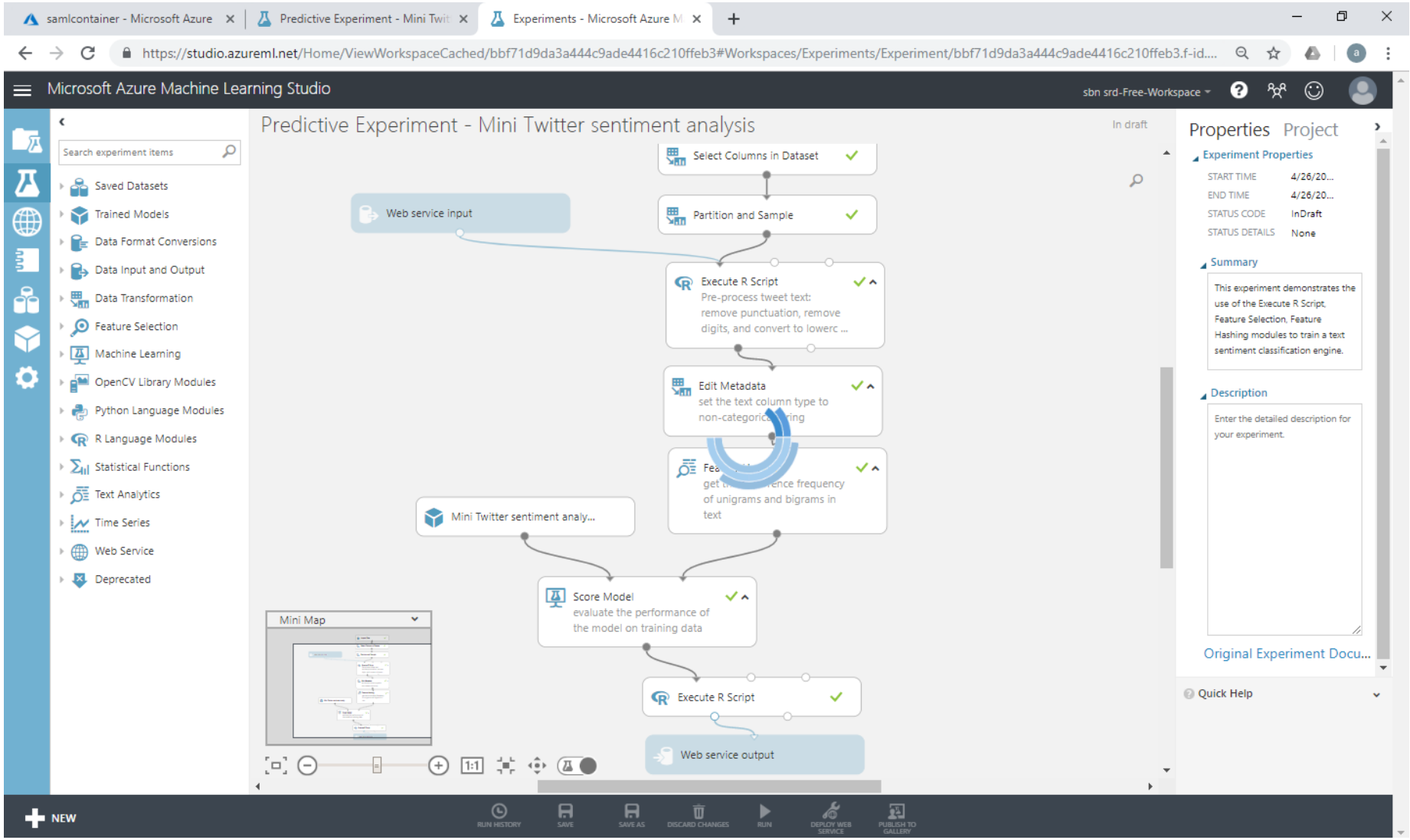
Machine Learning Model -> Web Service

* sentiment analytics model (Azure AI Gallery)
  - https://gallery.azure.ai/Experiment/Predictive-Mini-Twitter-sentiment-analysis-Experiment-1
  - *Open in Studio, Sign in*, select location



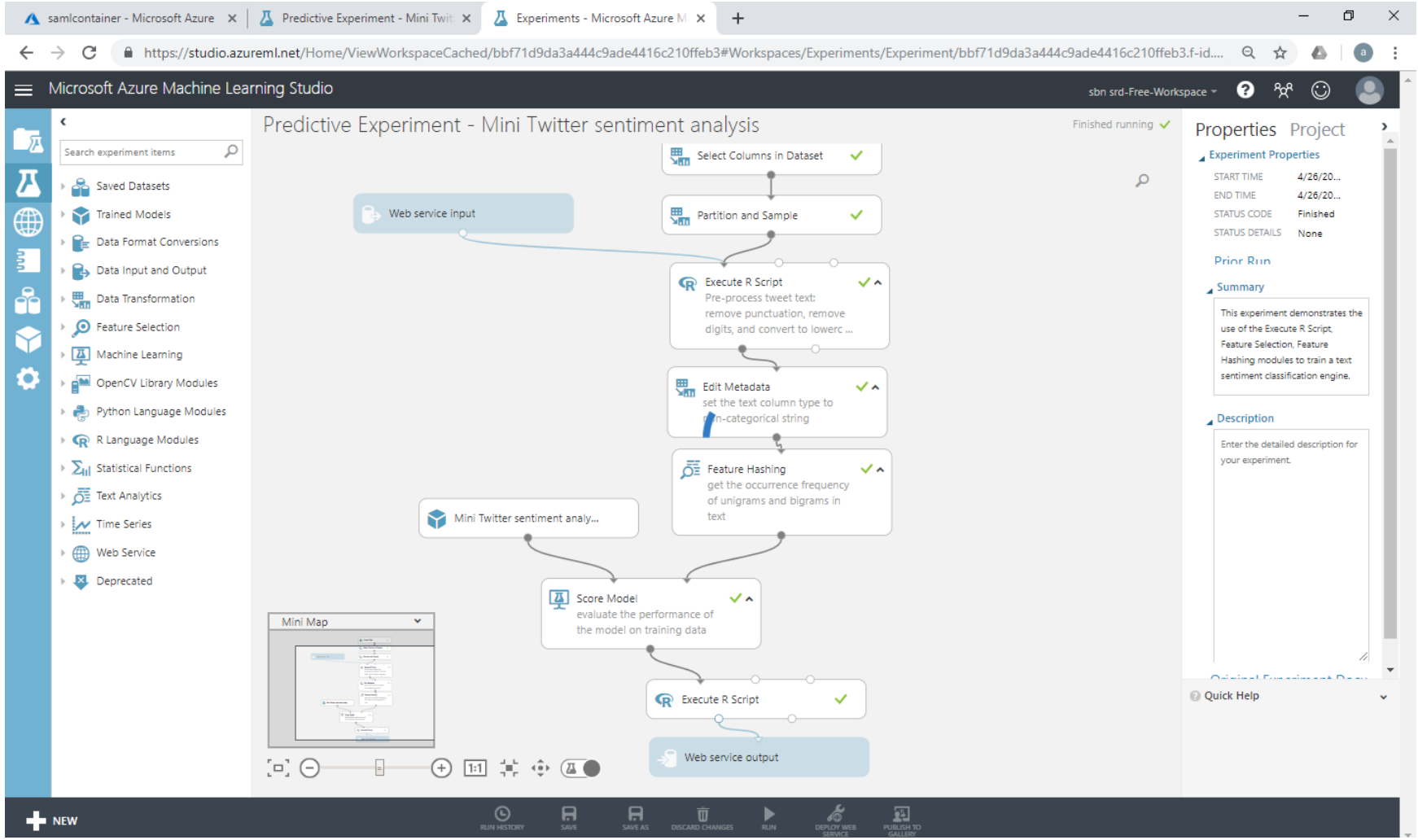
Machine Learning Model -> Web Service

* sentiment analytics model
  - Run



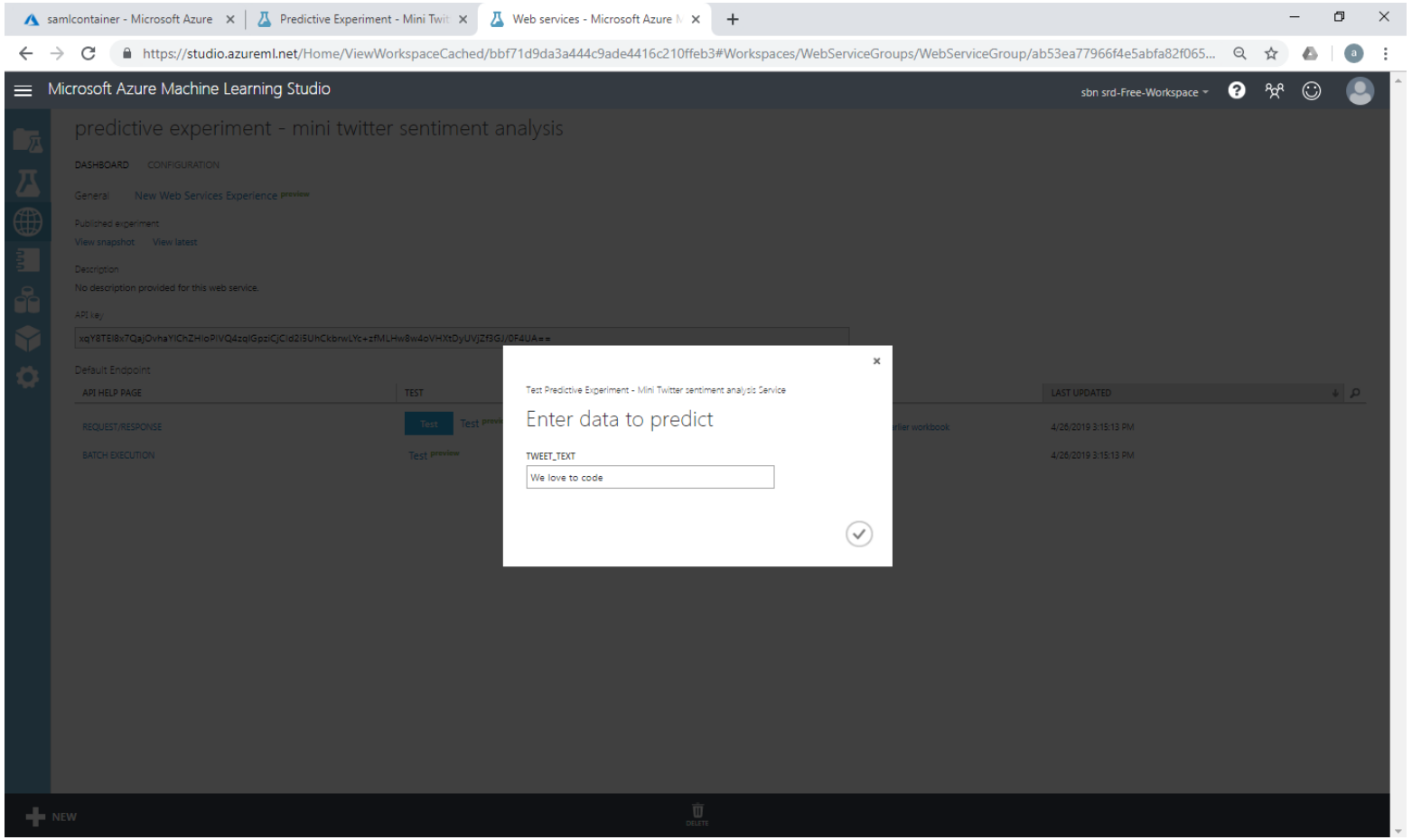
Machine Learning Model -> Web Service

* sentiment analytics model
  - *Deploy Web Service*



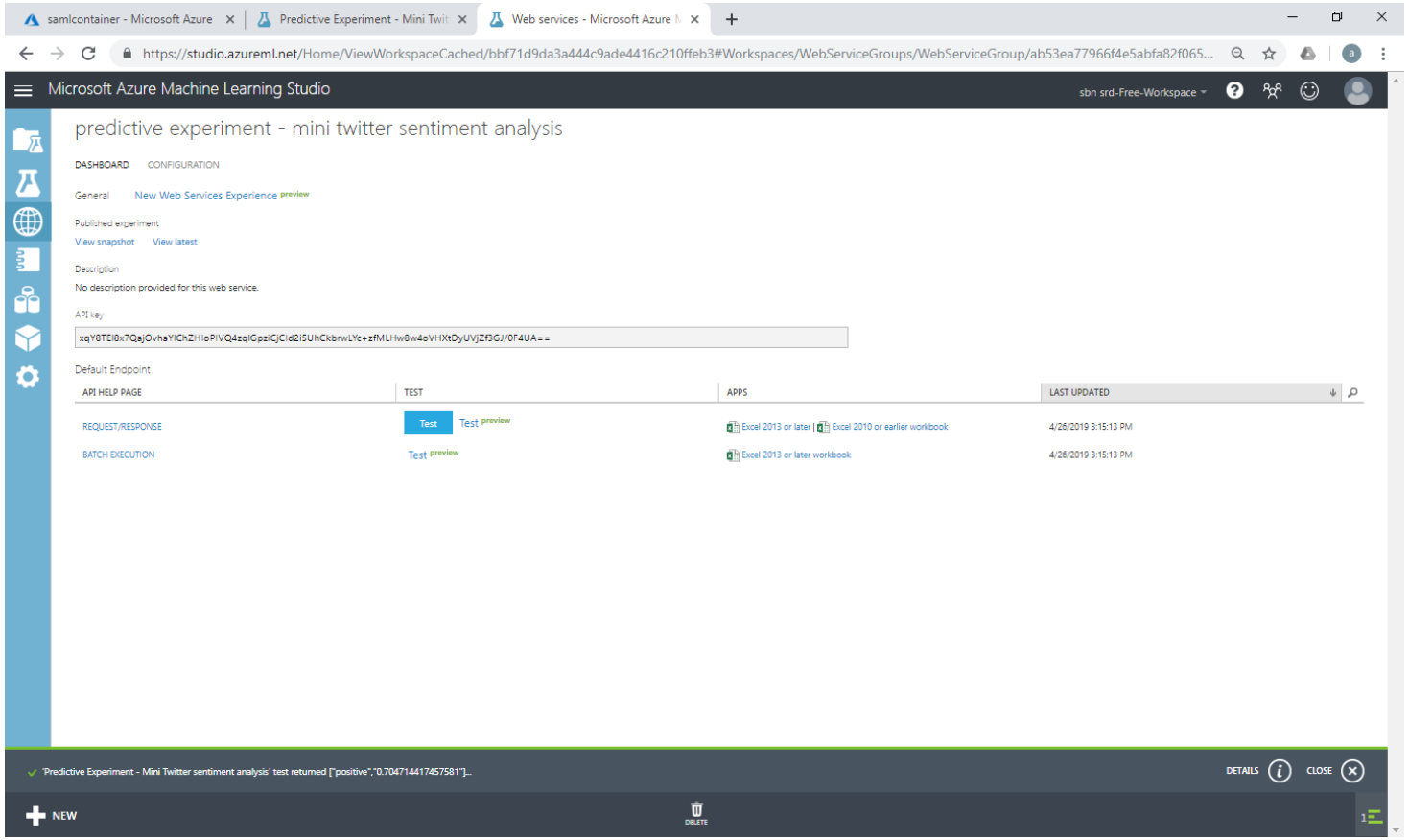
Machine Learning Model -> Web Service

* sentiment analytics model
  - testing
    - Test -> input text



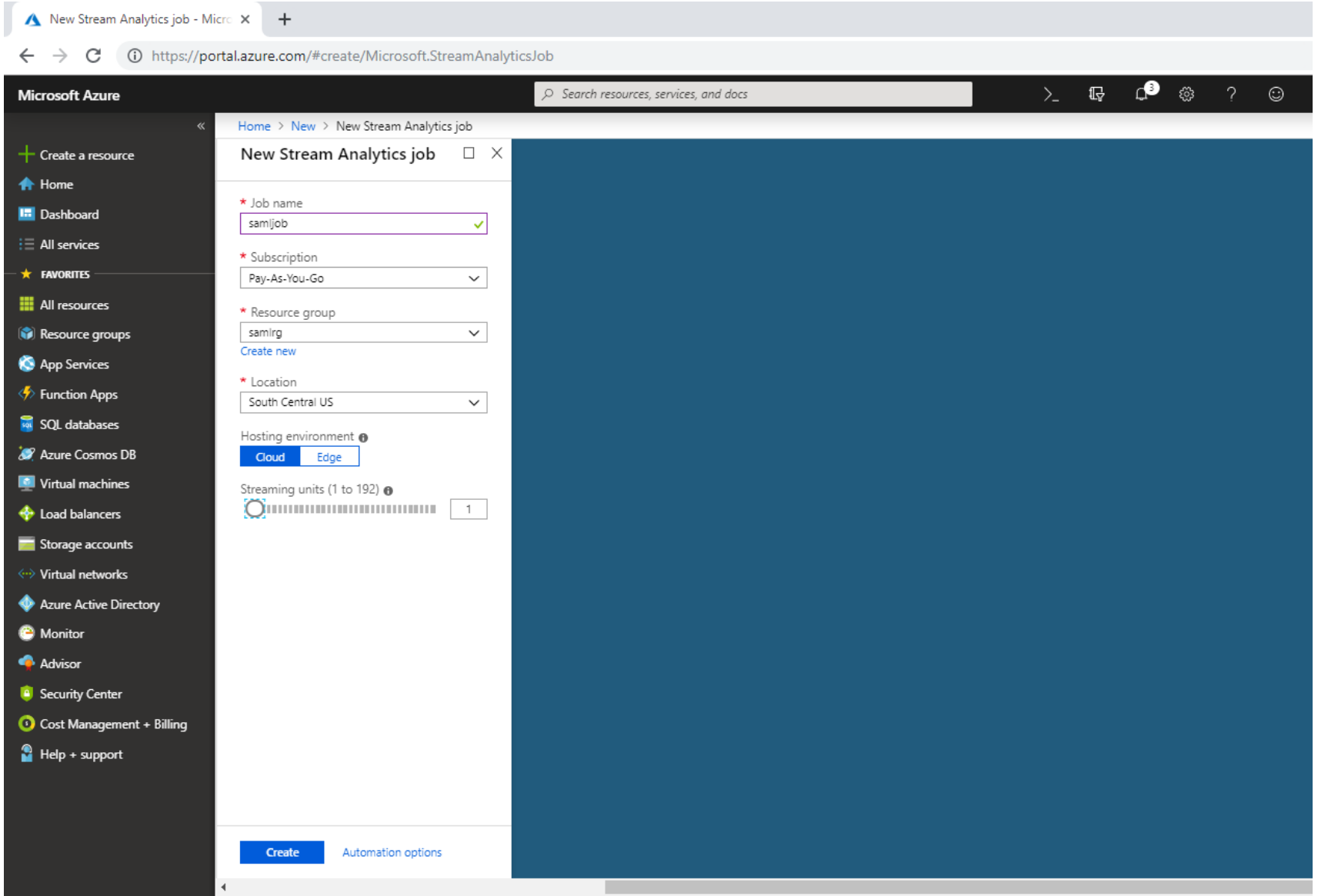
Machine Learning Model -> Web Service

* sentiment analytics model
  - testing
    - result
  - download Excel workbook (*Excel 2010 or earlier workbook*) – it contains the API key and the web service URL



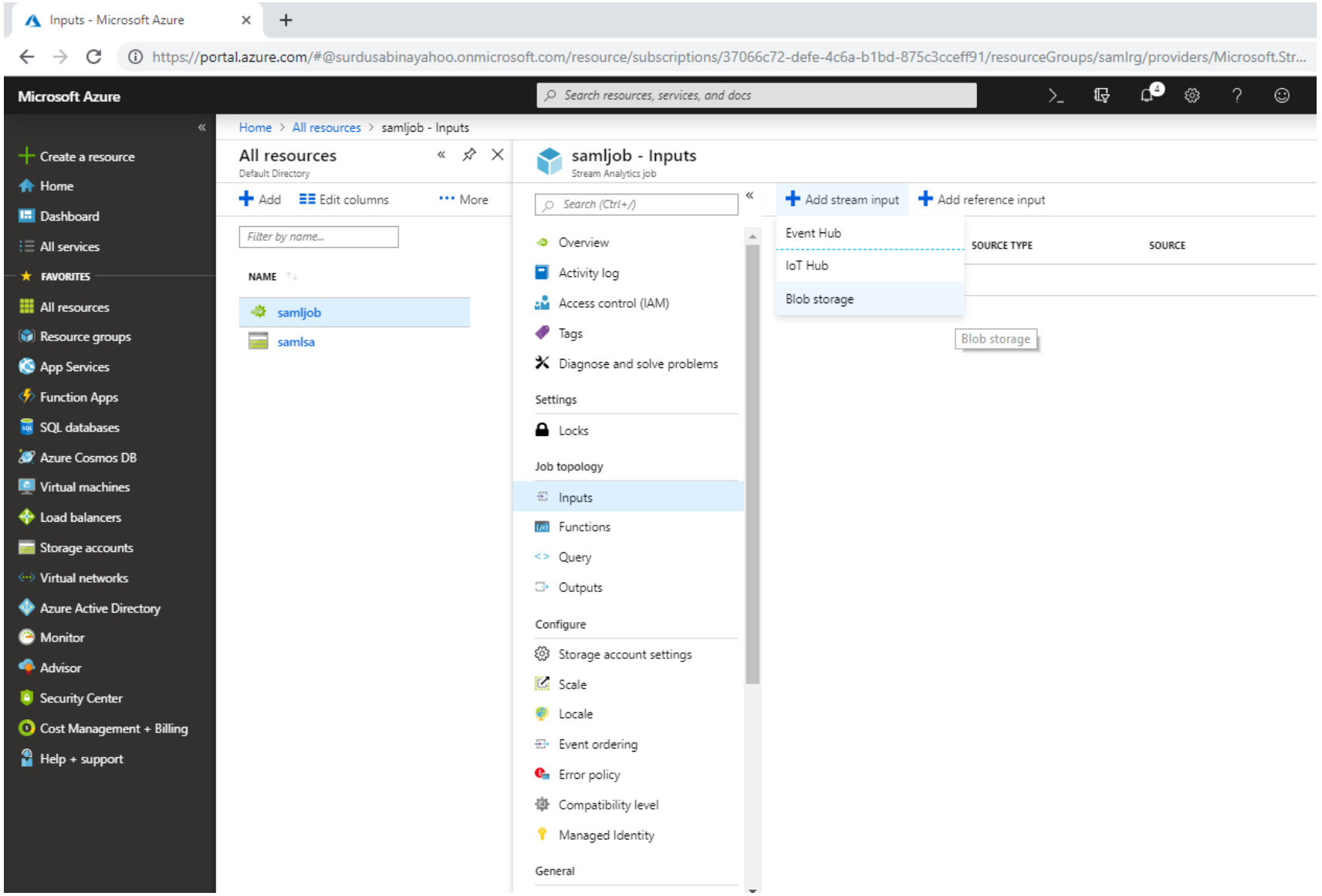
Job

** Create a resource -> Analytics -> Stream Analytics Job*



Job

* configure the input – previously loaded .csv file



Job

* configure the input
  - *Event serialization format -> CSV*