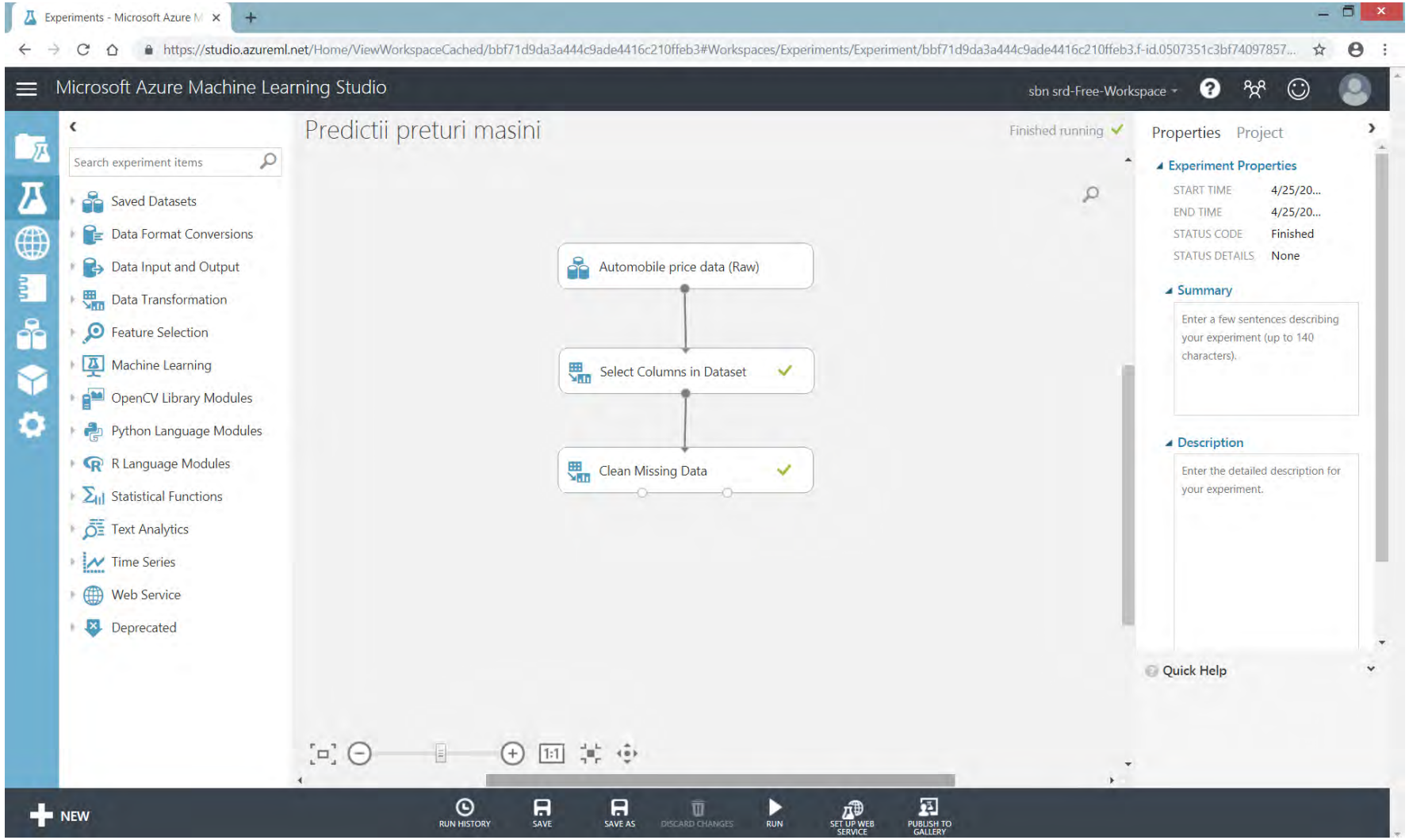
Database Management Systems

Azure Machine Learning*

* not among the exam topics

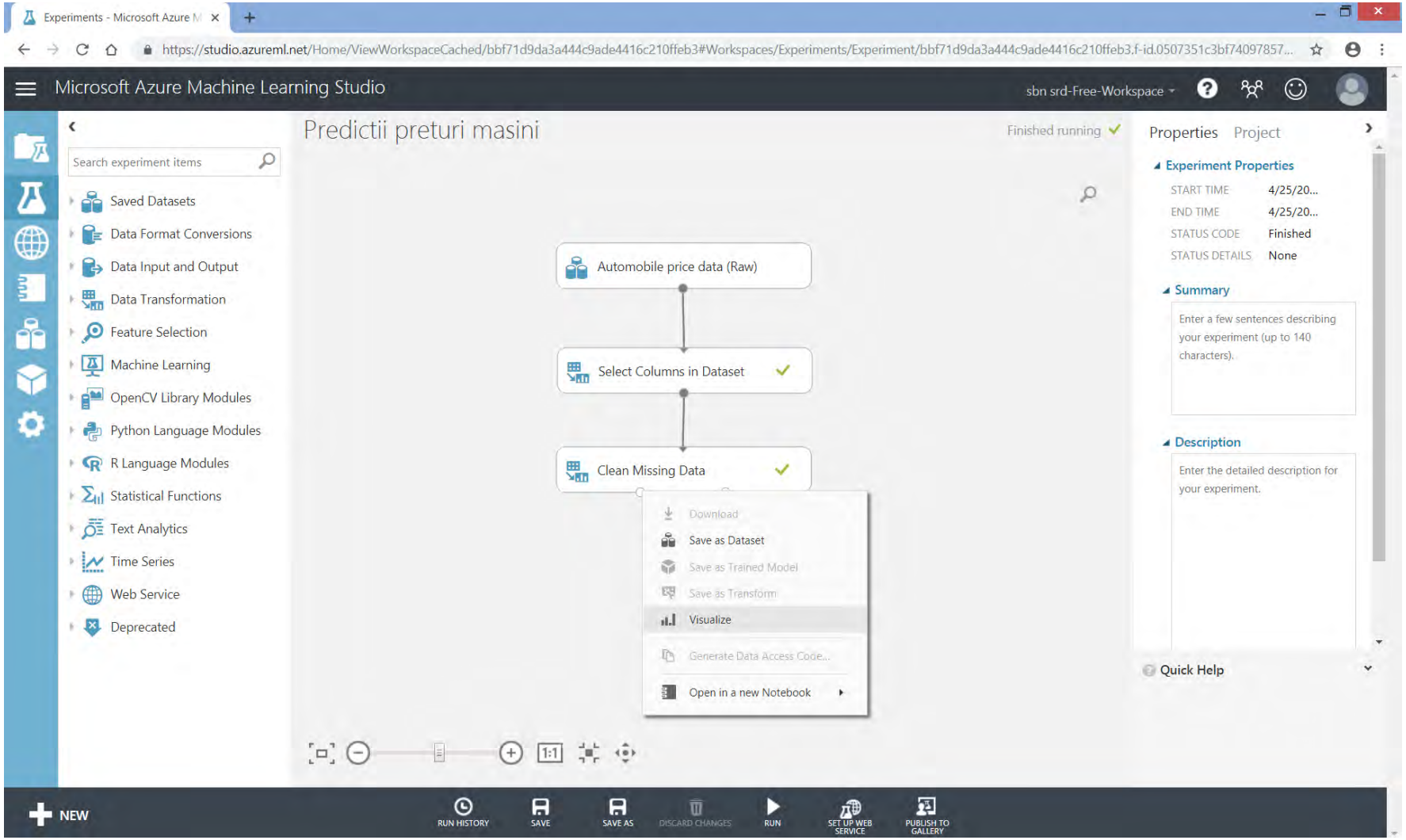
Car Price Prediction

* running the experiment
  - *Run*



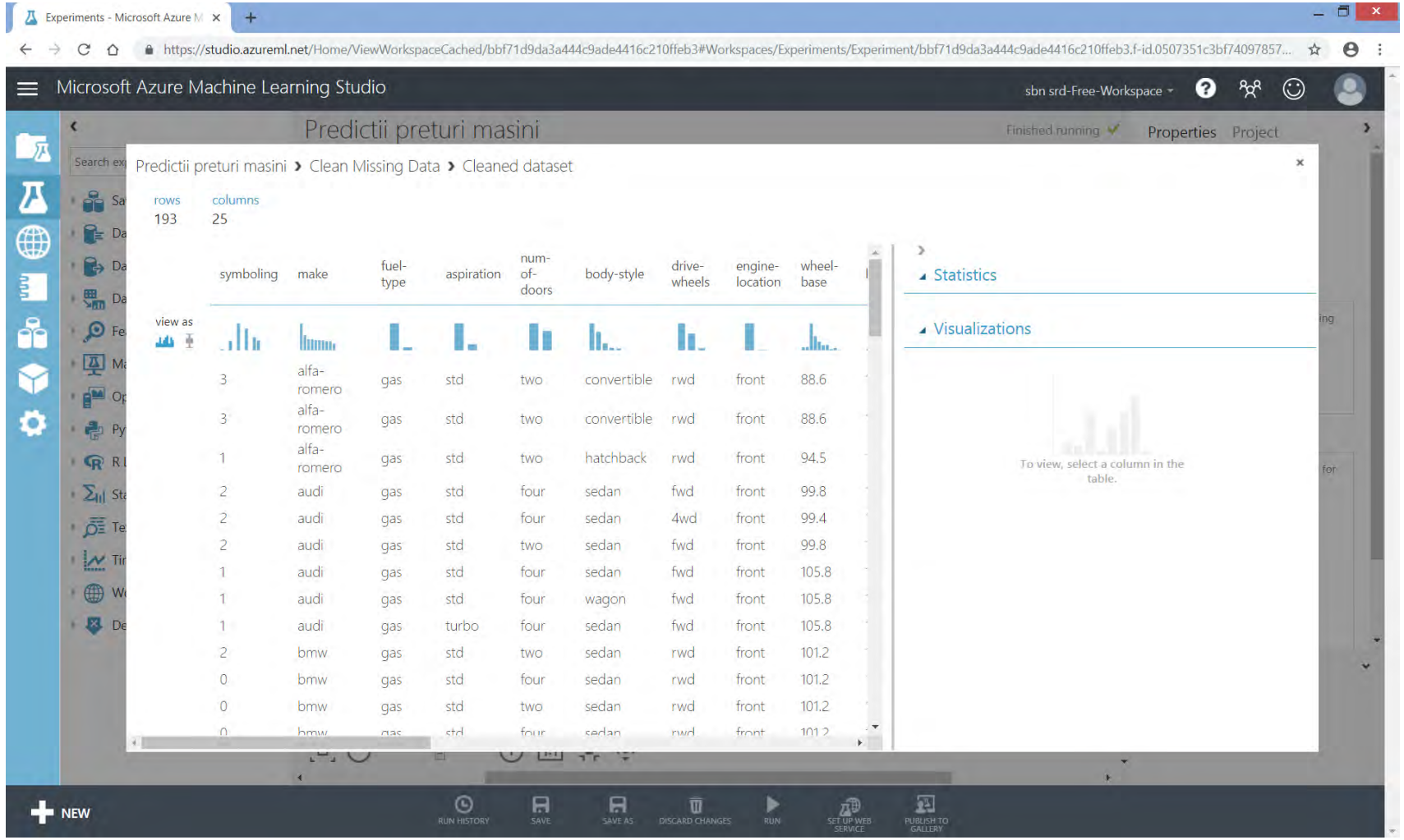
Car Price Prediction

* displaying the data
  - *Clean Missing Data* module -> left output port -> *Visualize*



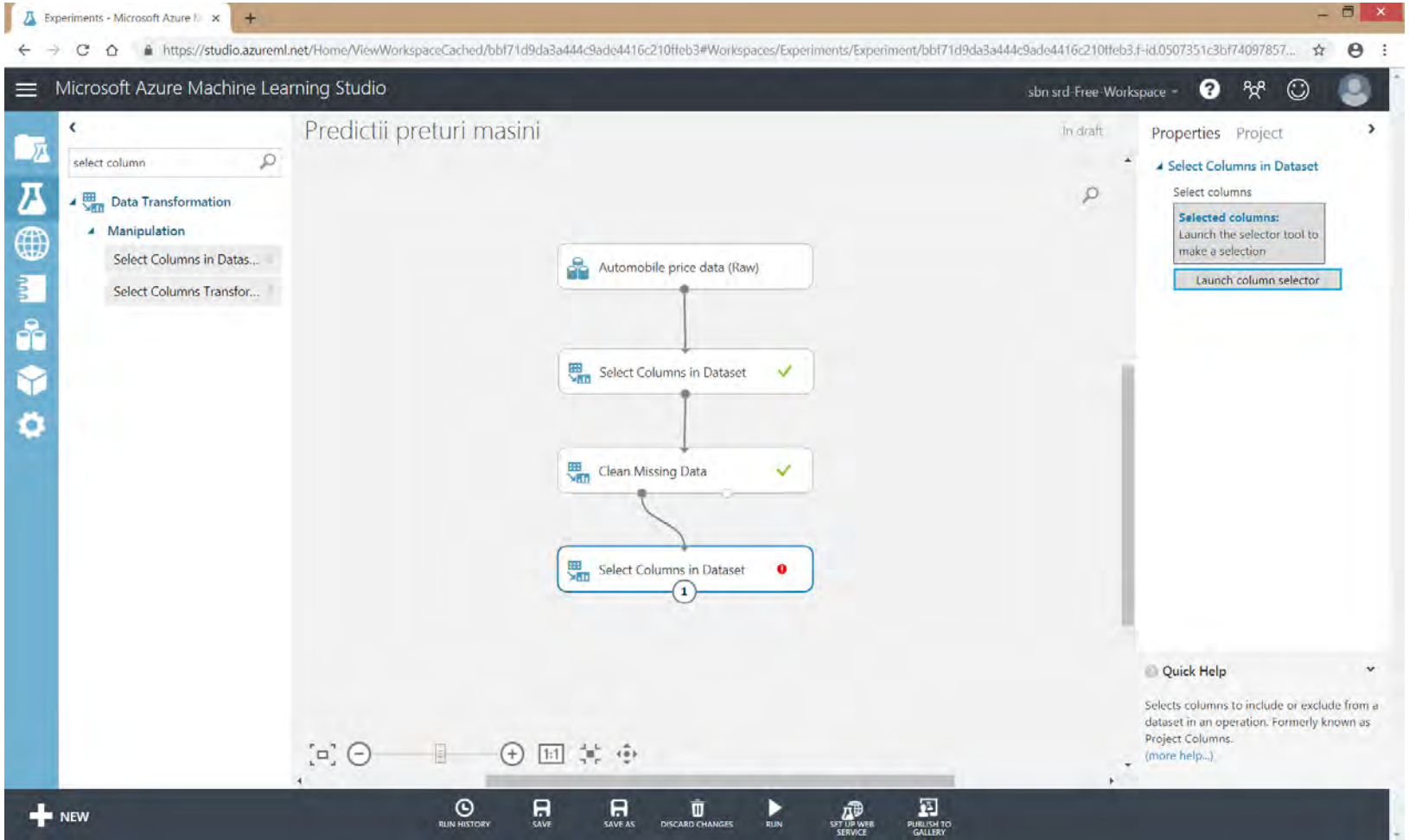
Car Price Prediction

* displaying the data
  - *Clean Missing Data* module -> left output port -> *Visualize*



Car Price Prediction

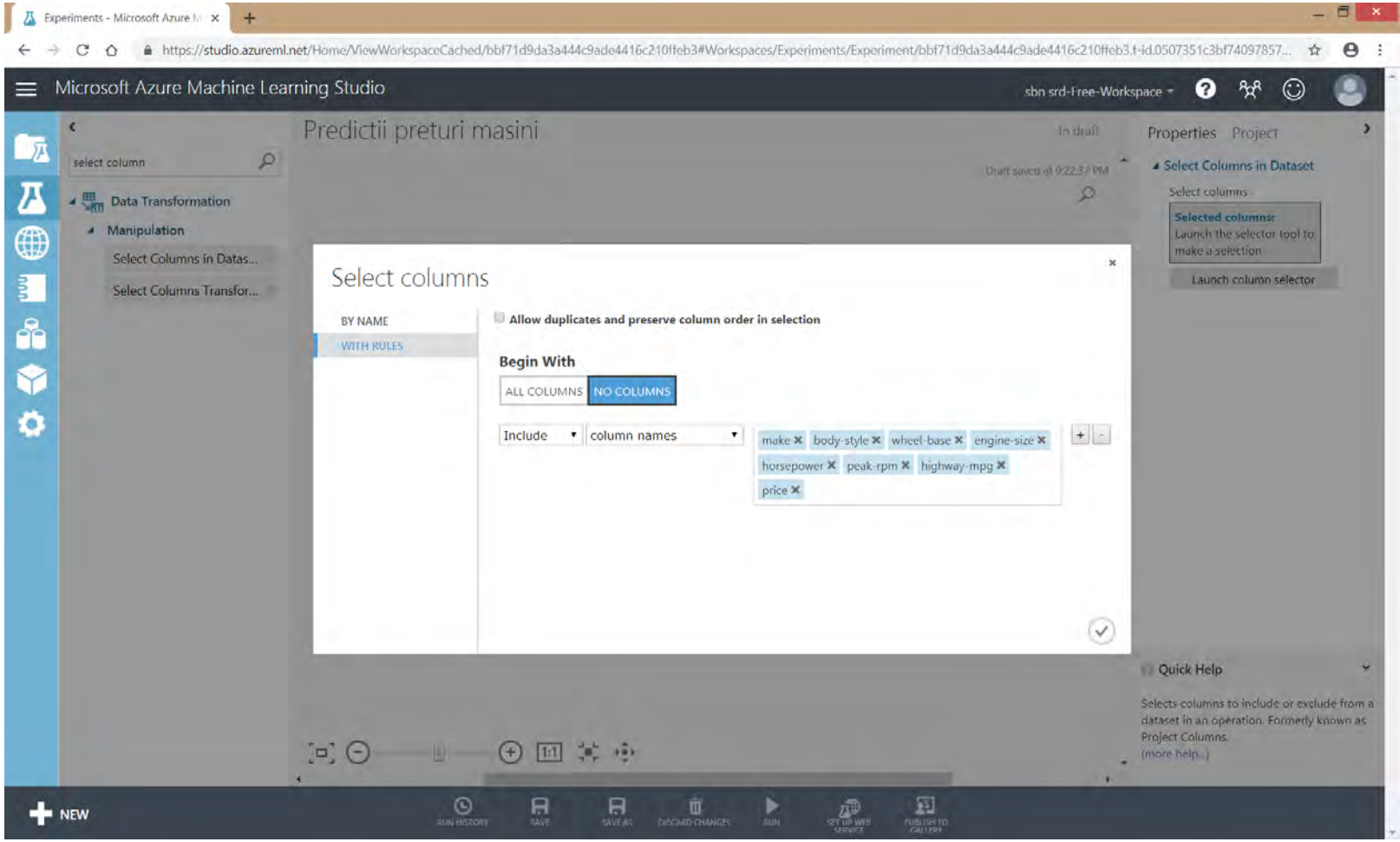
* defining the *features*
    - used to create the predictive model
    - *Select Columns in Dataset* module



Car Price Prediction

* defining the *features*

- *Select Columns in Dataset*
  - *Launch column selector*
    - *Begin With*
      - *No columns*
    - *Include*
      - *make, body-style, wheel-base, engine-size, horsepower, peak-rpm, highway-mpg, price*



- goal: predict car price from selected features

Car Price Prediction

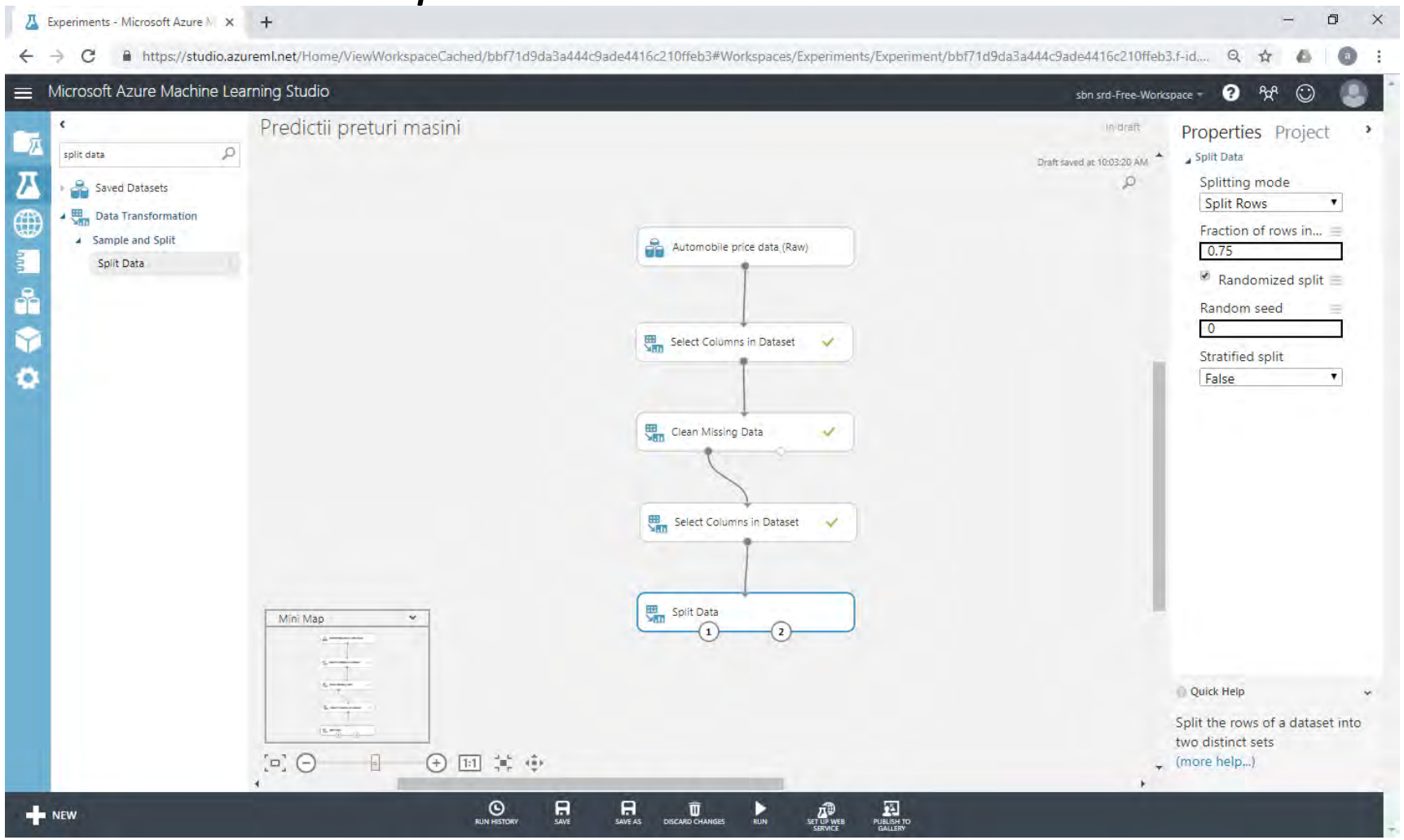
* choosing / applying the algorithm
    - create the training dataset and the test dataset
    - training dataset
        - dataset that includes the car price
        - the model is trained on this dataset
            - it searches for correlations between a car's features and its price
    - test dataset
        - dataset that includes the car price
        - the model is tested on this dataset
            - the price estimated by the model for each car is compared with the real price

Car Price Prediction

* choosing / applying the algorithm
    - create the training / test datasets - *Split Data* module

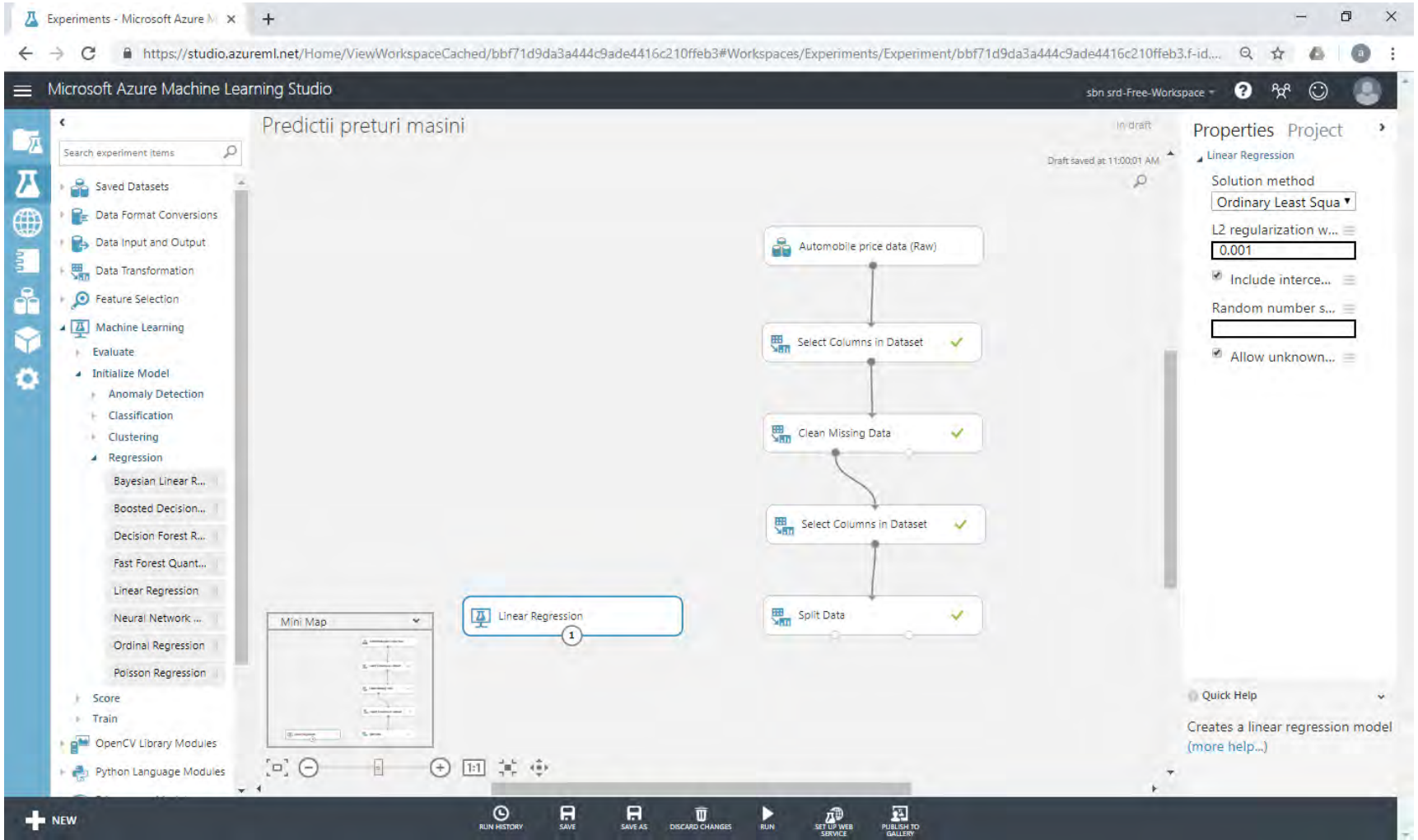
- *Split Data*
    - *Fraction of rows in the first output dataset*
        - *0.75*
        - i.e., training dataset - 75% of the data

- *Run* experiment



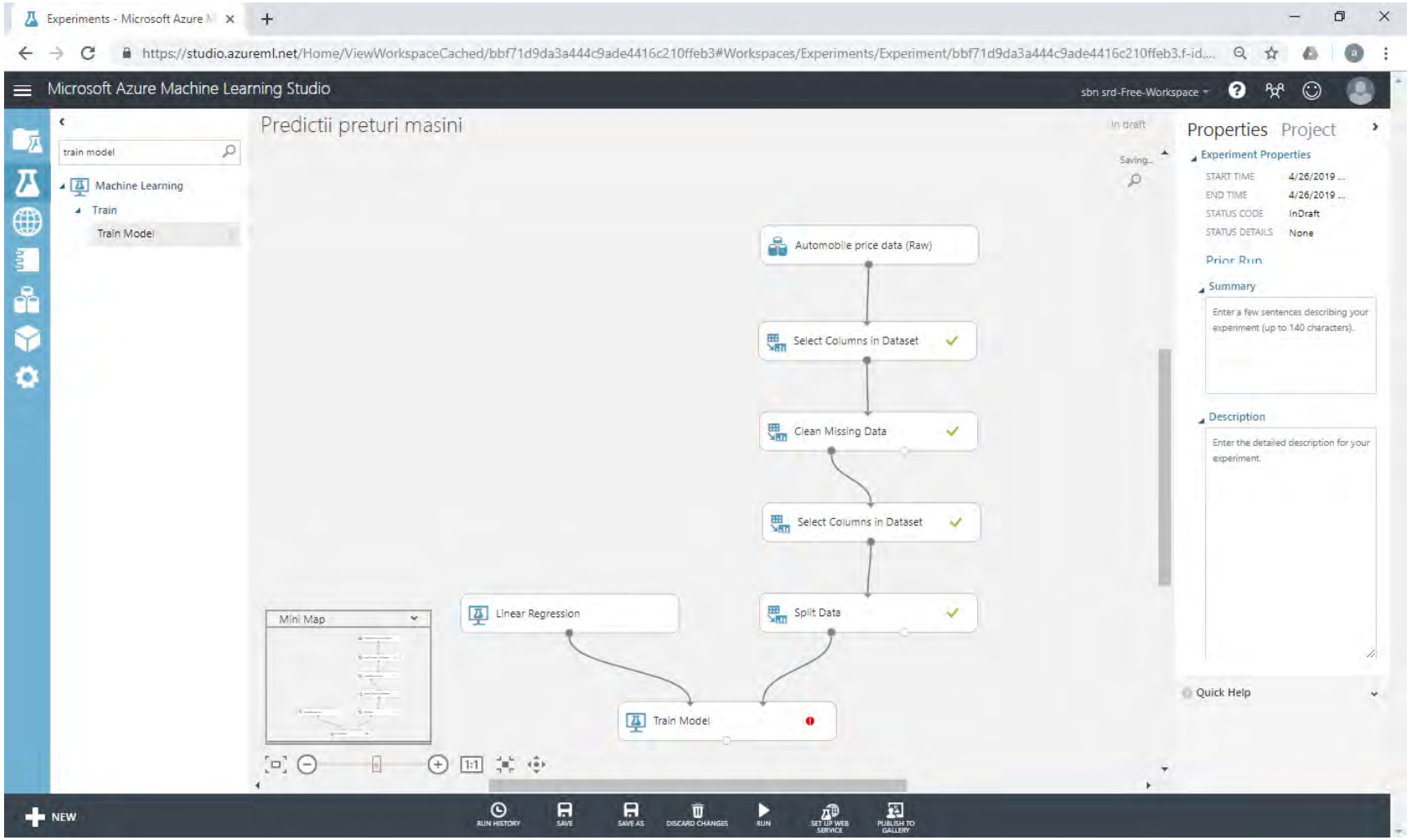
Car Price Prediction

* choosing / applying the algorithm
    - *Machine Learning -> Initialize Model -> Regression -> Linear Regression*



Car Price Prediction

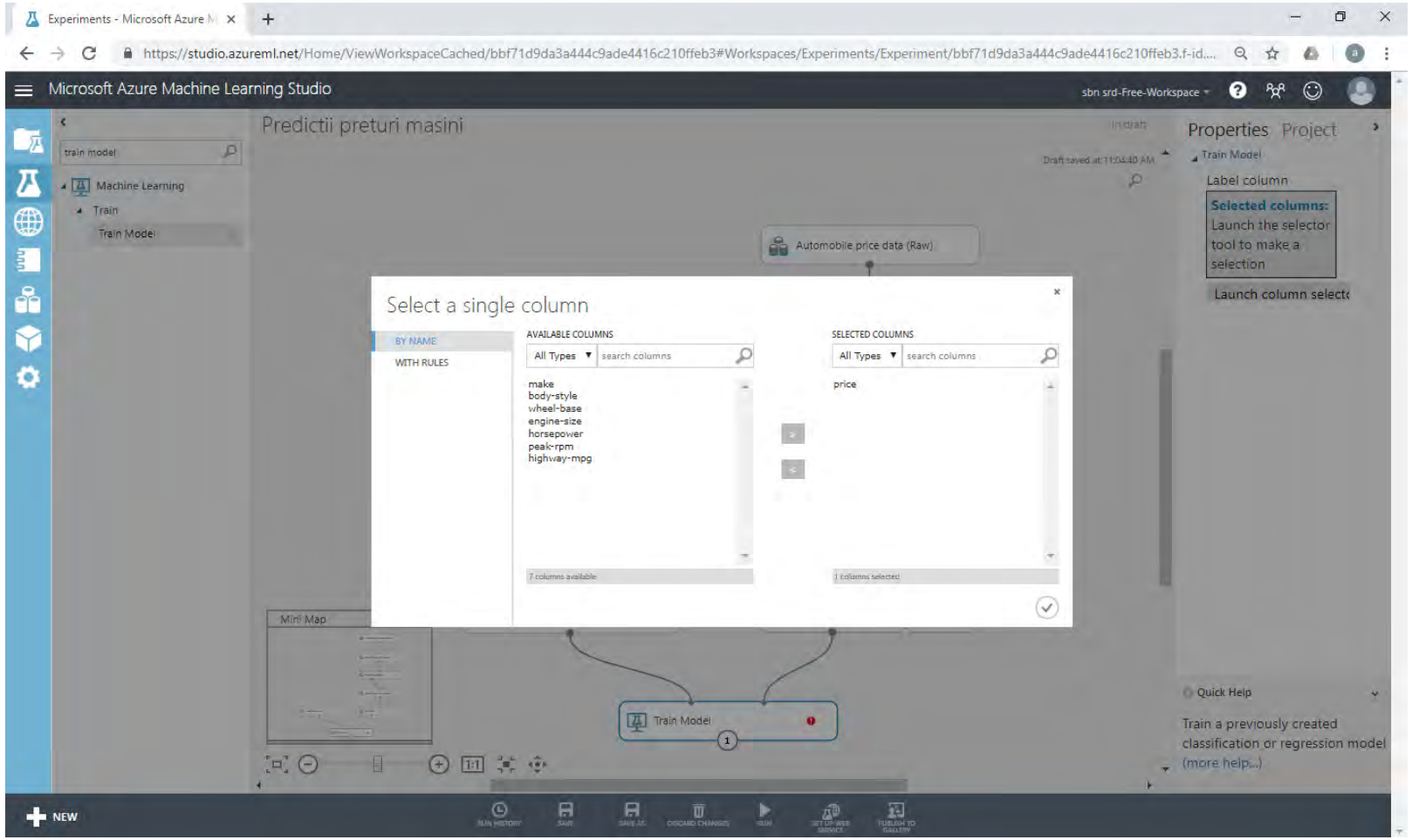
* choosing / applying the algorithm
    - *Train Model* module



Car Price Prediction

* choosing / applying the algorithm

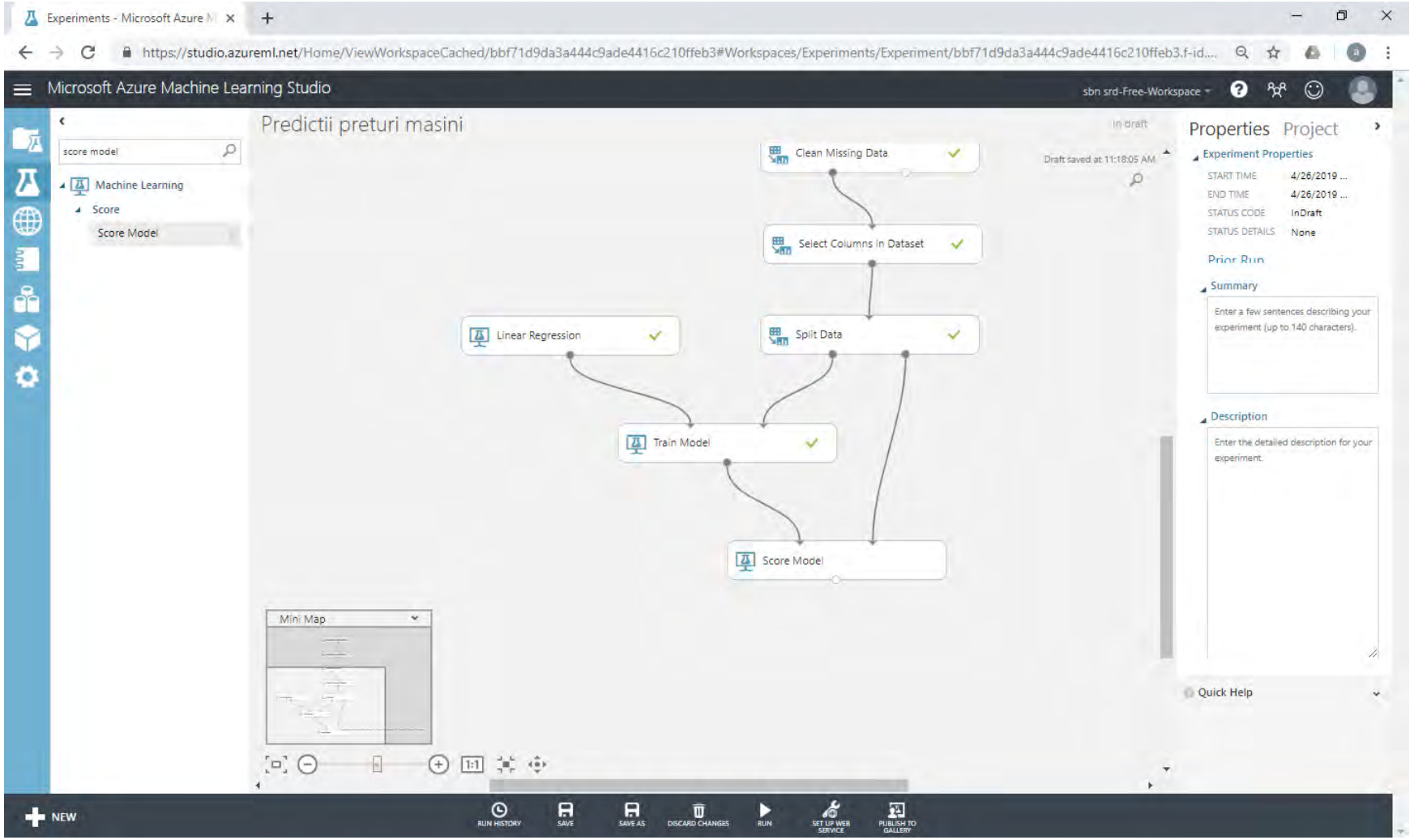
- *Train Model*
  - *Launch column selector*
    - move column *price* from *Available columns* to *Selected columns*
- *Run* experiment



Car Price Prediction

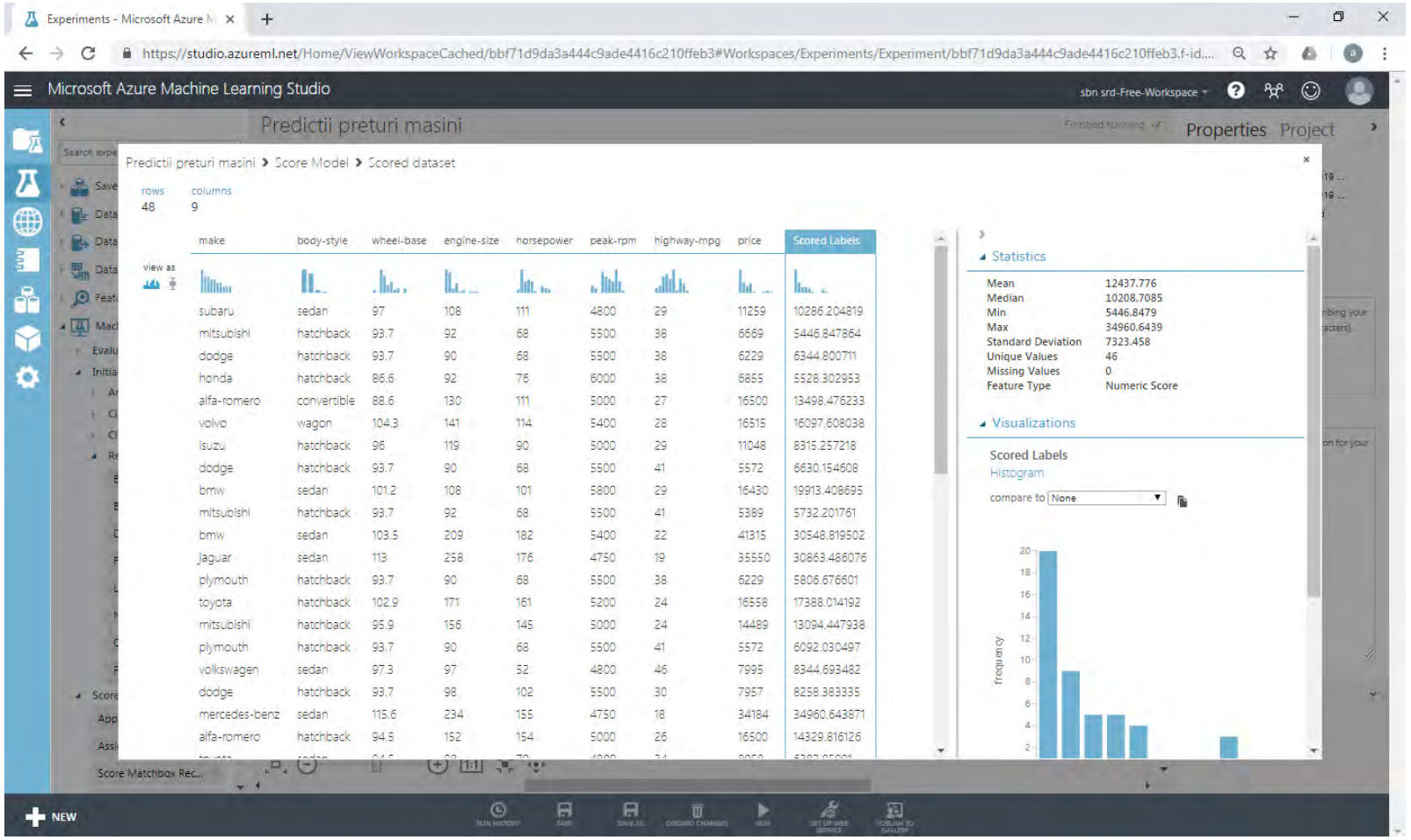
* testing the model - *Score Model* module

- *Run* experiment



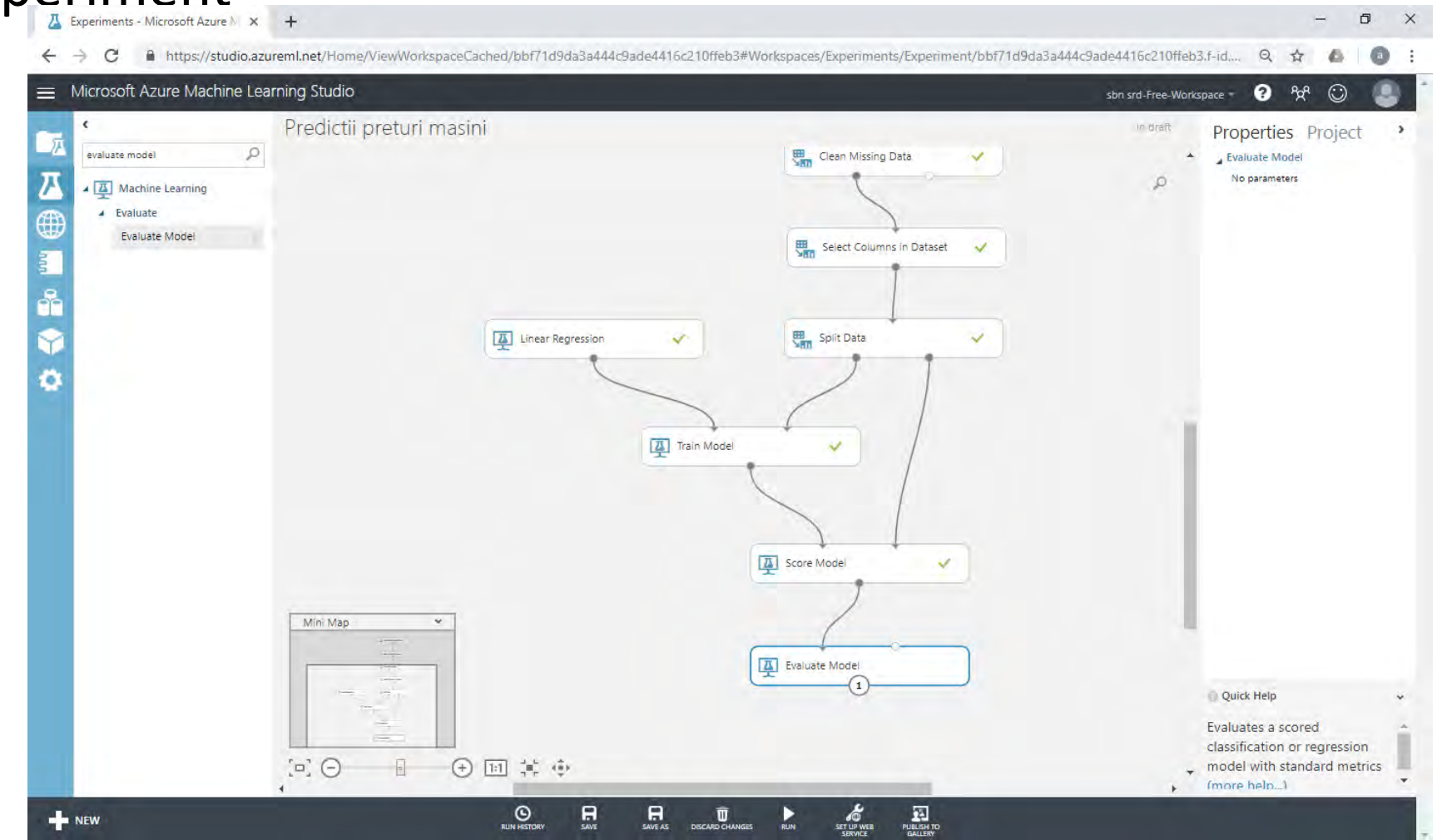
Car Price Prediction

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



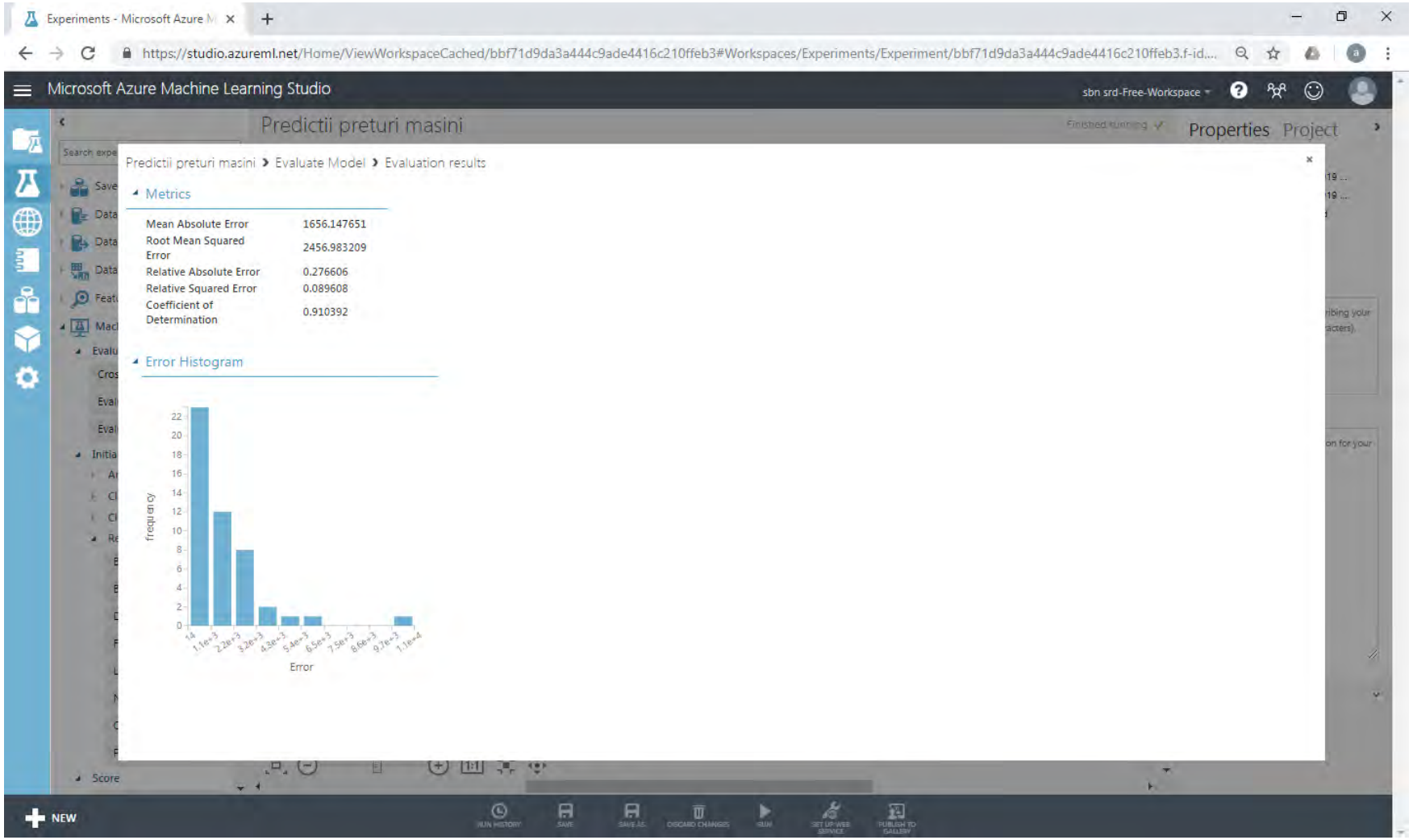
Car Price Prediction

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



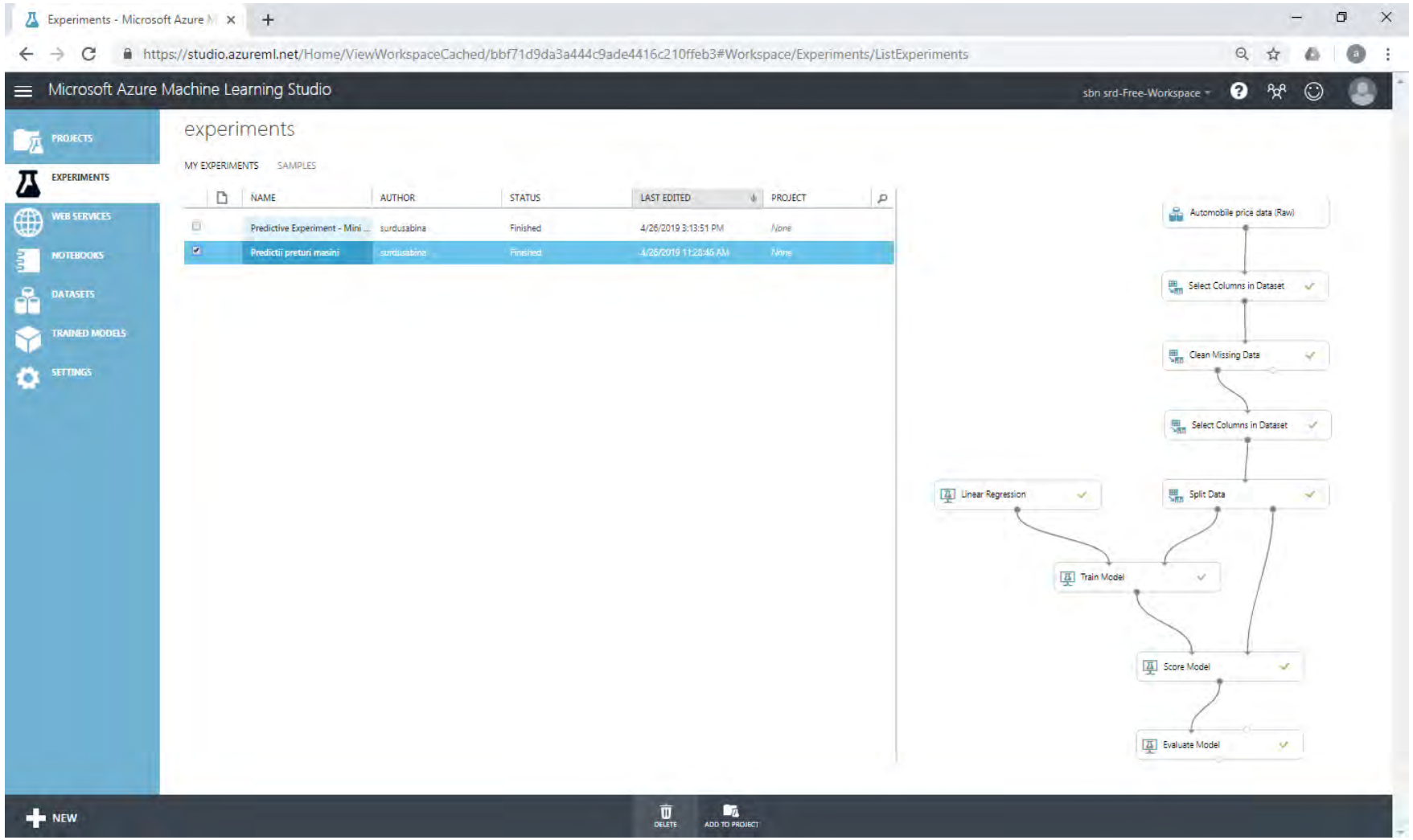
Car Price Prediction

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



Car Price Prediction

* eliminate resources



Car Price Prediction

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