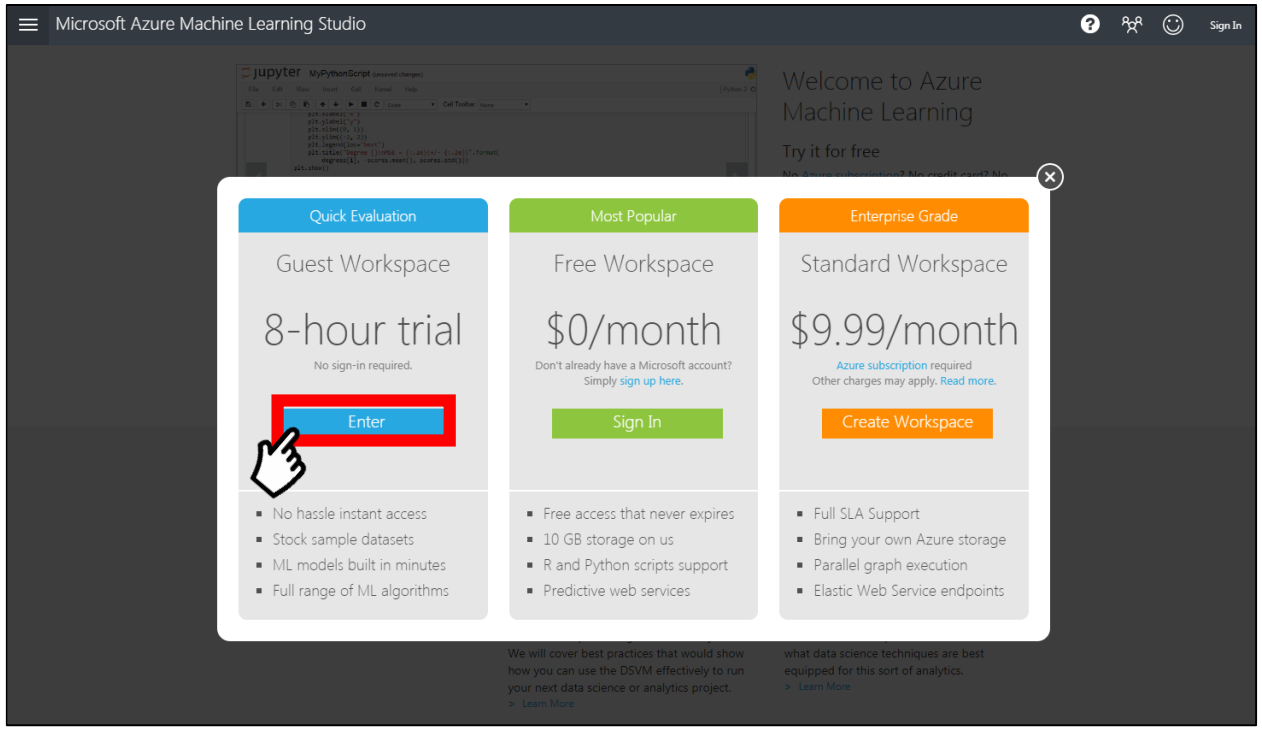
Machine Learning with Microsoft Azure ML Studio

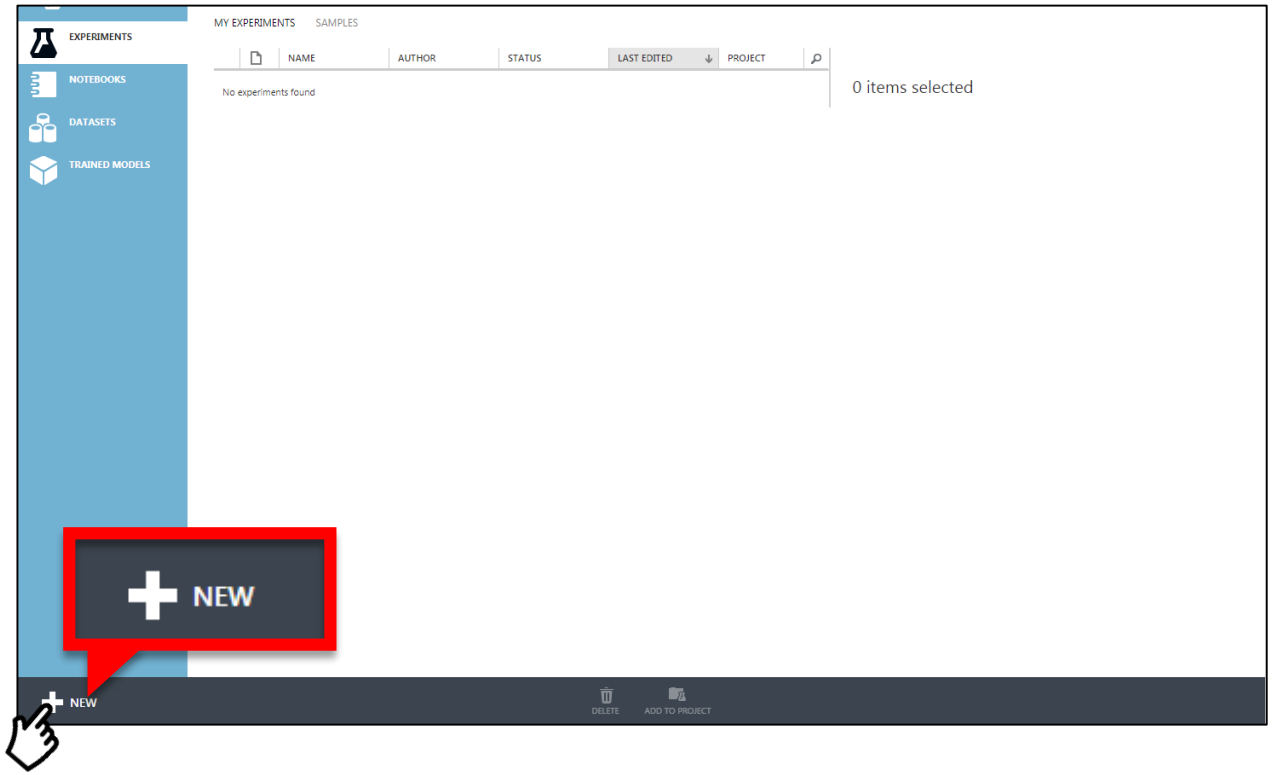
Microsoft Student Partner
차주연 강민수

Start ML Studio

1. Start ML Studio Free trial →
https://studio.azureml.net/?selectAccess=true&o=1

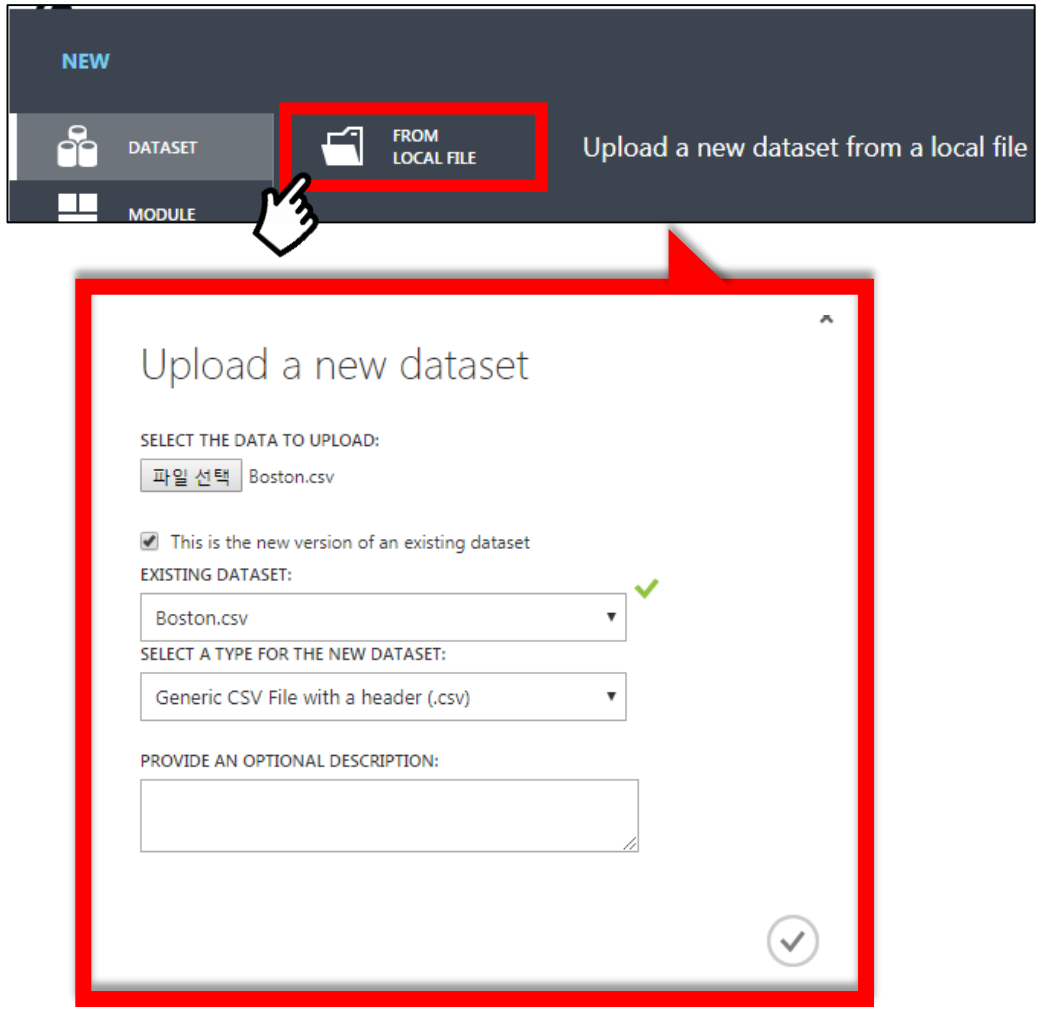


2. Click the NEW botton

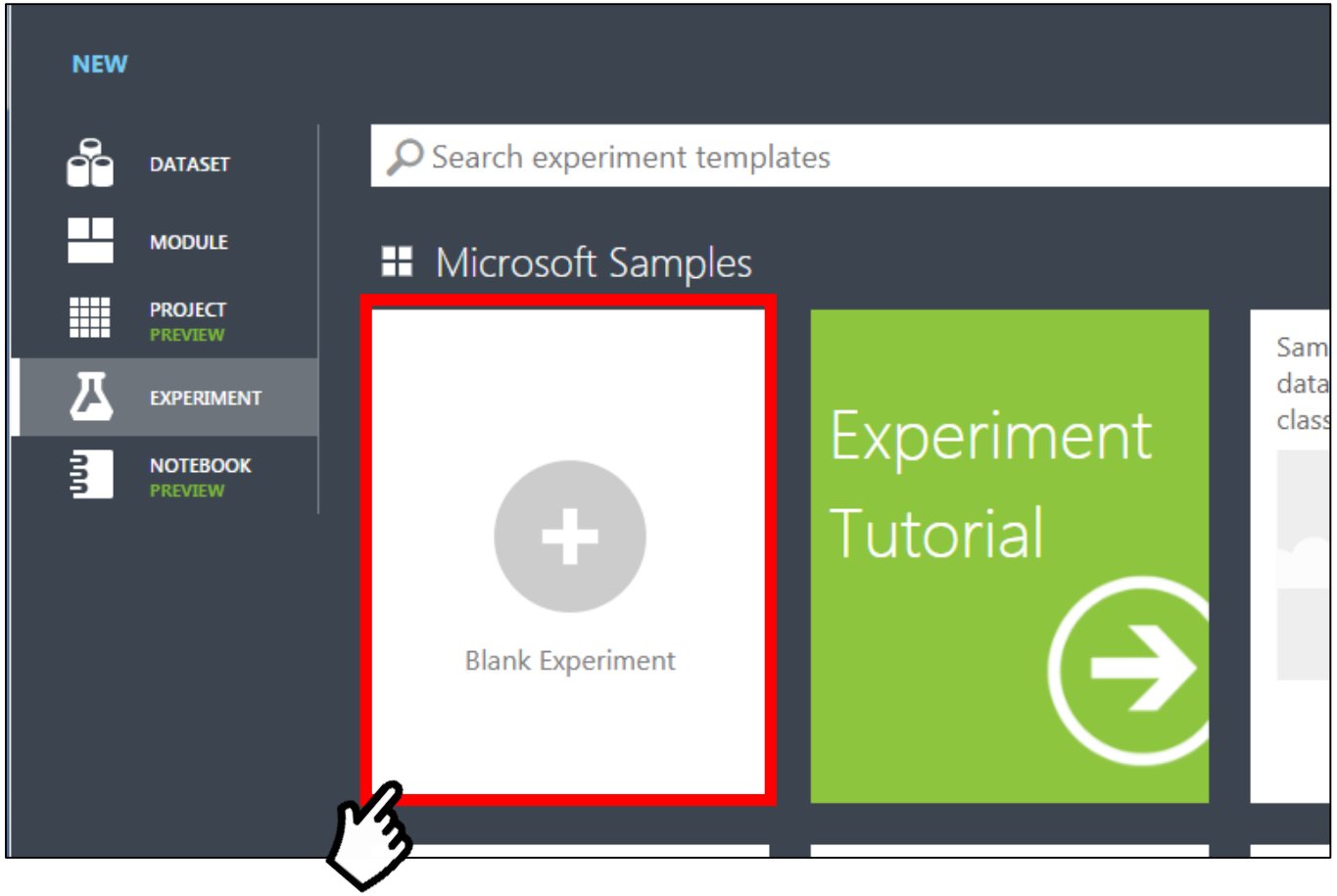


Start ML Studio

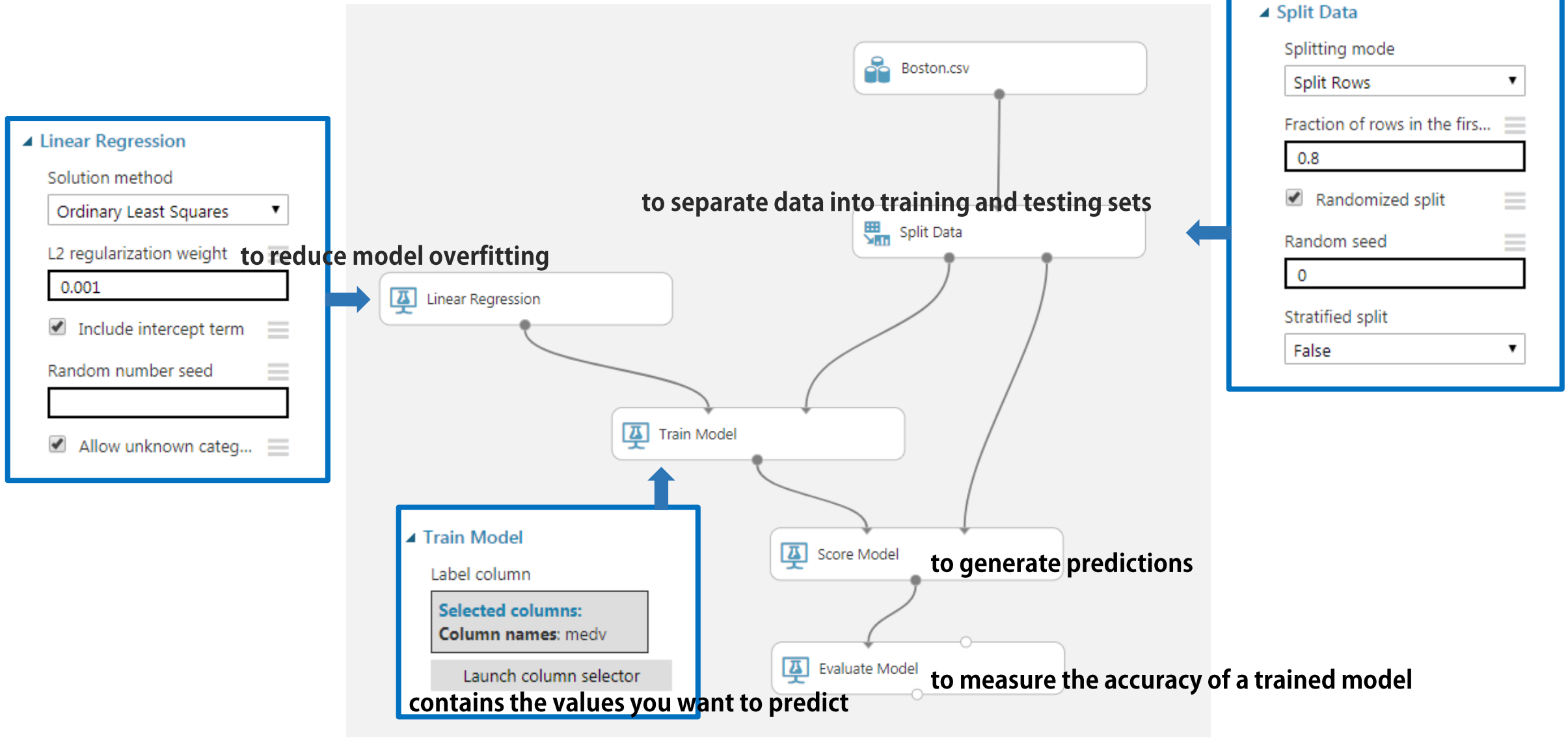
3. Upload a Boston dataset



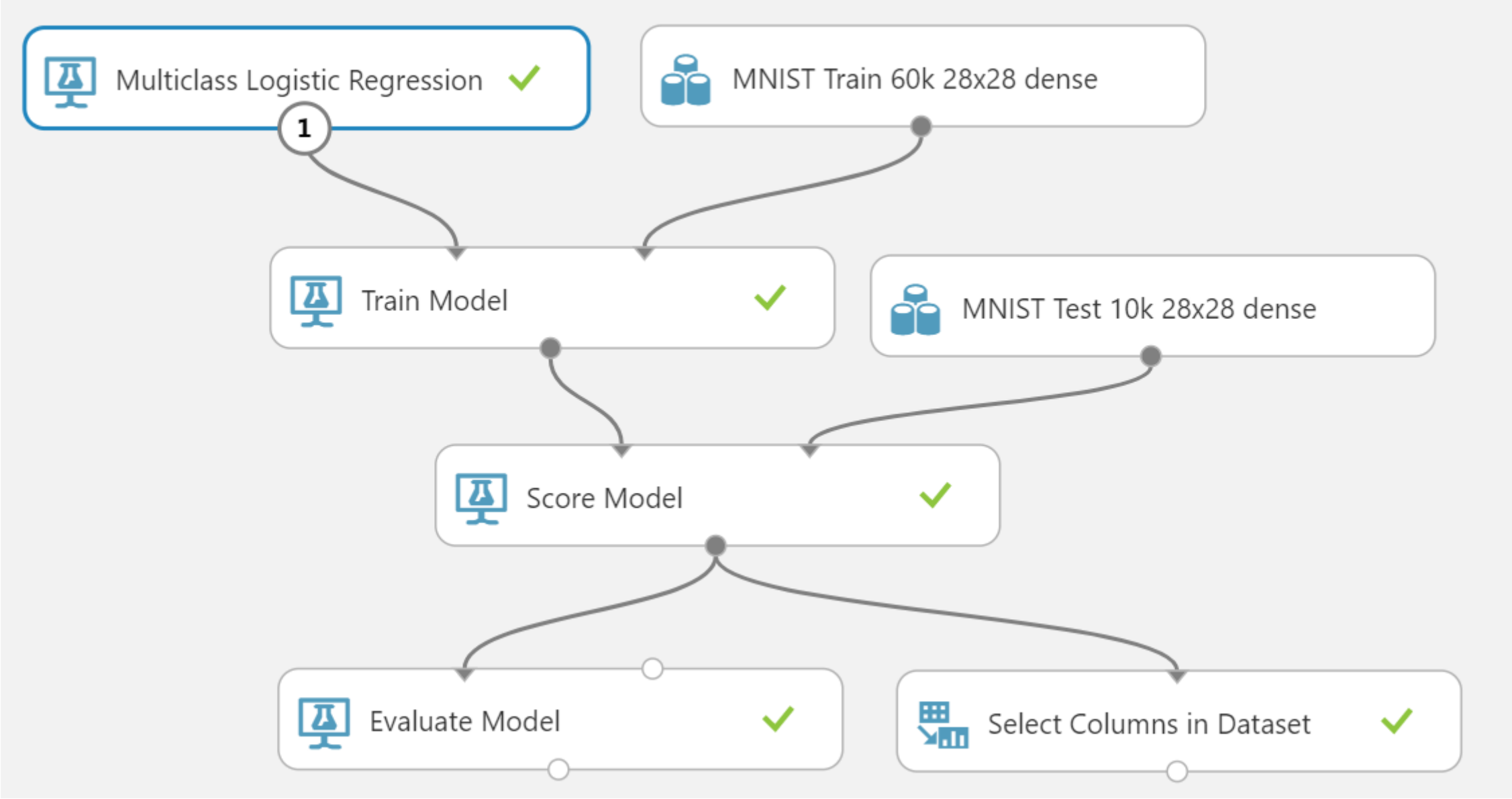
4. Make a Blank Experiment



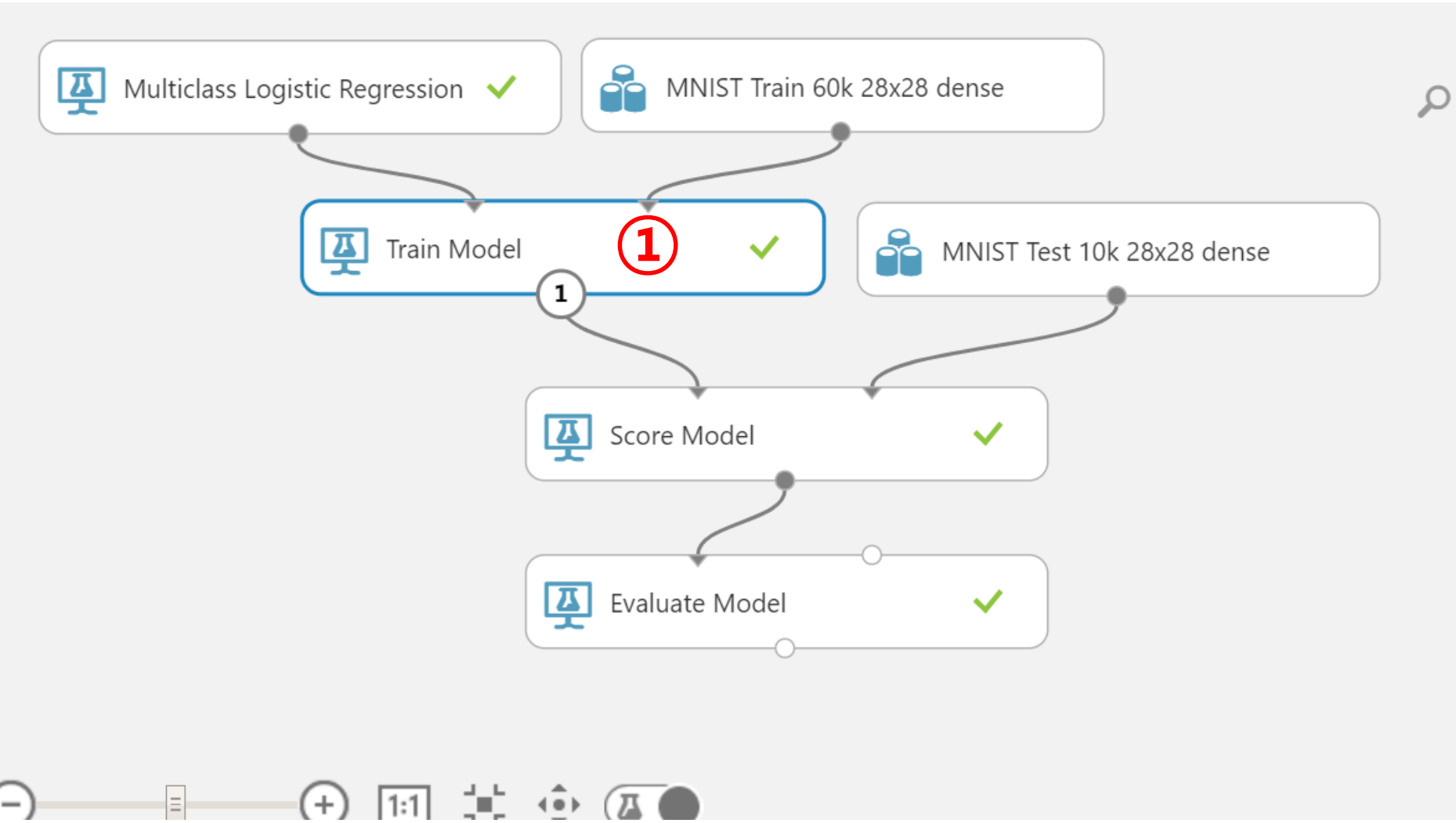
Linear Regression



Logistic regression



Logistic regression
Train Model



Train Model

Label column

Selected columns:
Column names: Label

2

Launch column selector

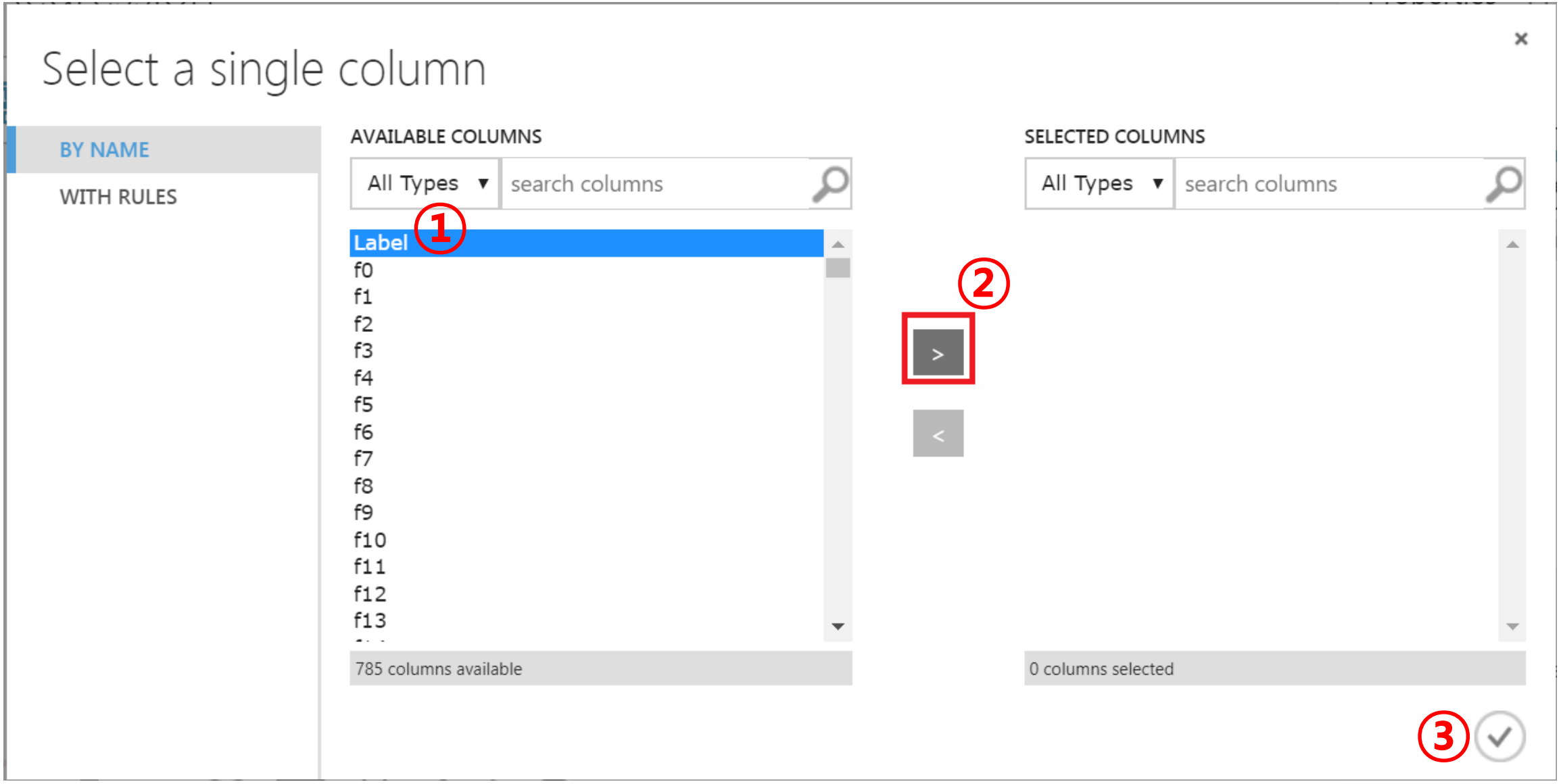
START TIME	11/20/2...
END TIME	11/20/2...
ELAPSED TIME	0:00:00.0...
STATUS CODE	Finished
STATUS DETAILS	Task output was present in

Quick Help

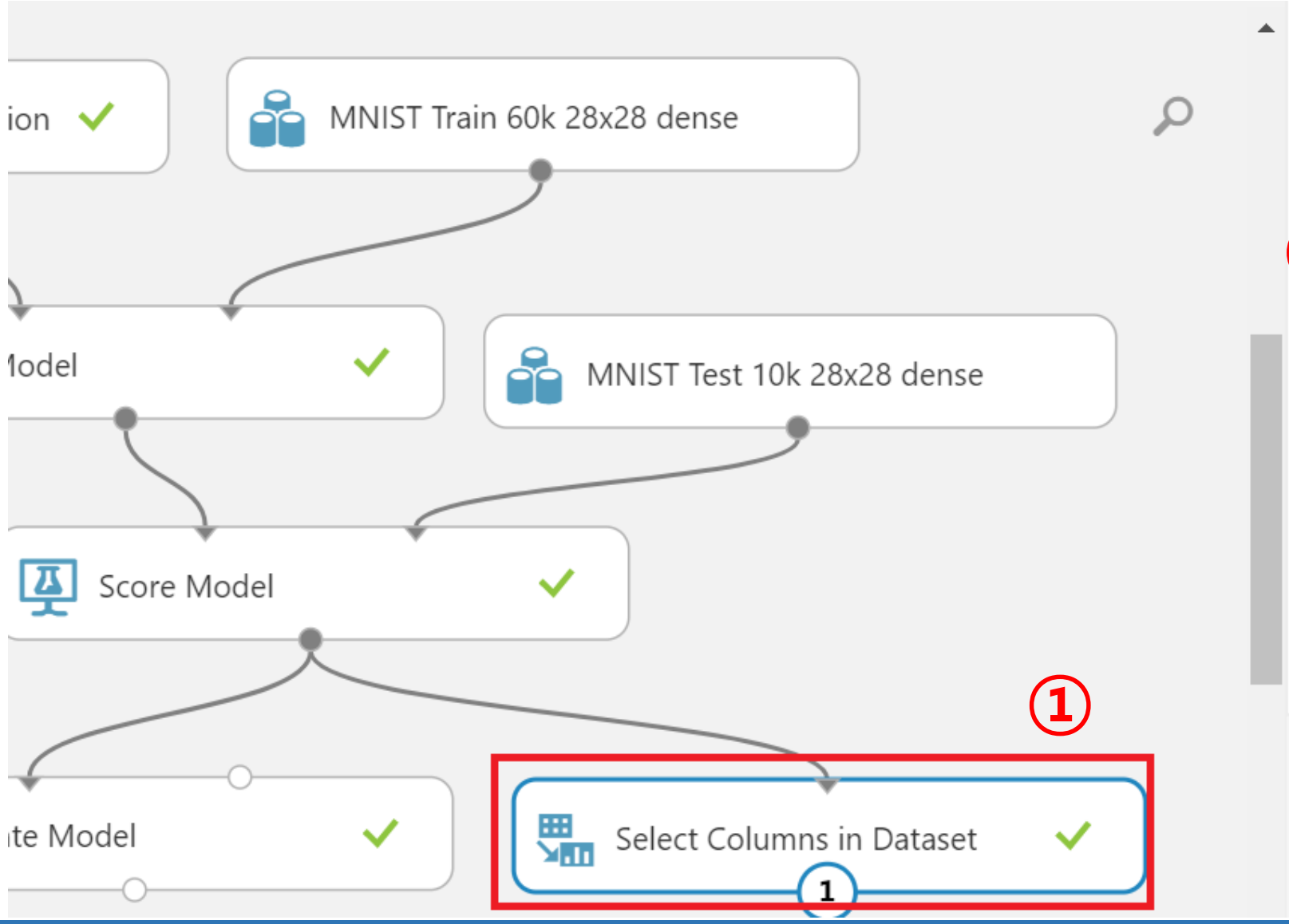
Train a previously created classification or regression model

(more help...)

Logistic regression
Train Model



Logistic regression
Select Columns in Dataset



Select Columns in Dataset

Select columns

Selected columns:
Column names:
Label,Scored Labels

②

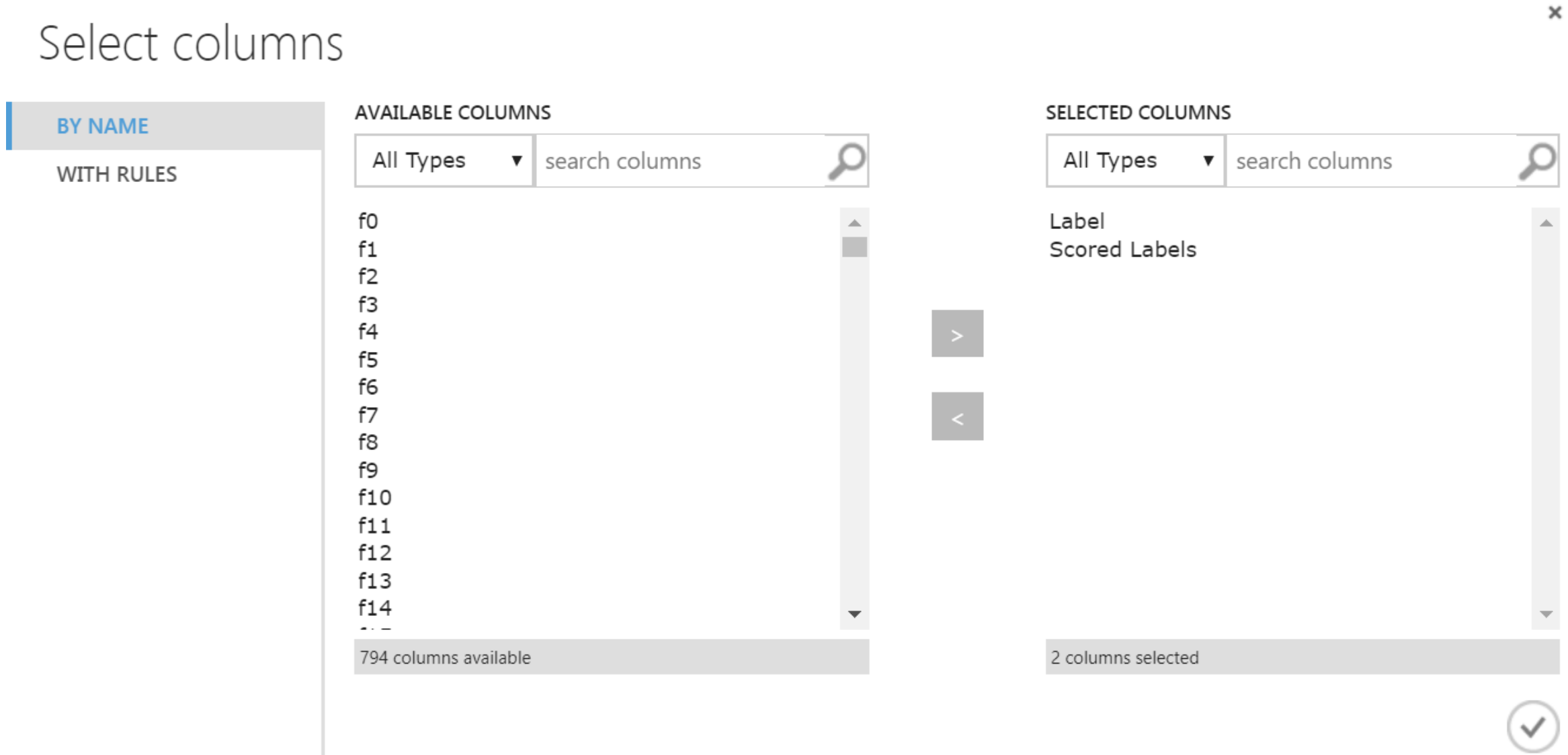
Launch column selector

START TIME	11/25/2...
END TIME	11/25/2...
ELAPSED TIME	0:00:00.0...
STATUS CODE	Finished
STATUS DETAILS	Task output was

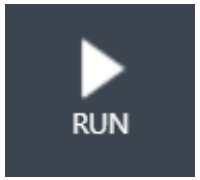
Quick Help

Selects columns to include or exclude from dataset in an operation. Formerly known as

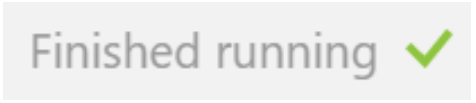
Logistic regression
Select Columns in Dataset



Logistic regression
결과 확인

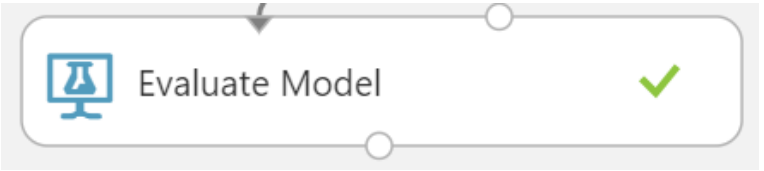


버튼을 누른 후



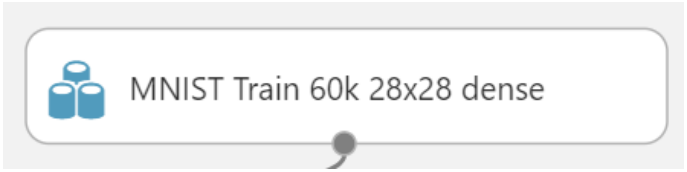
이 뜰 때까지 대기

결과 확인



오른쪽 버튼 클릭>Evaluation results>Visualize

참고) MNIST data 확인

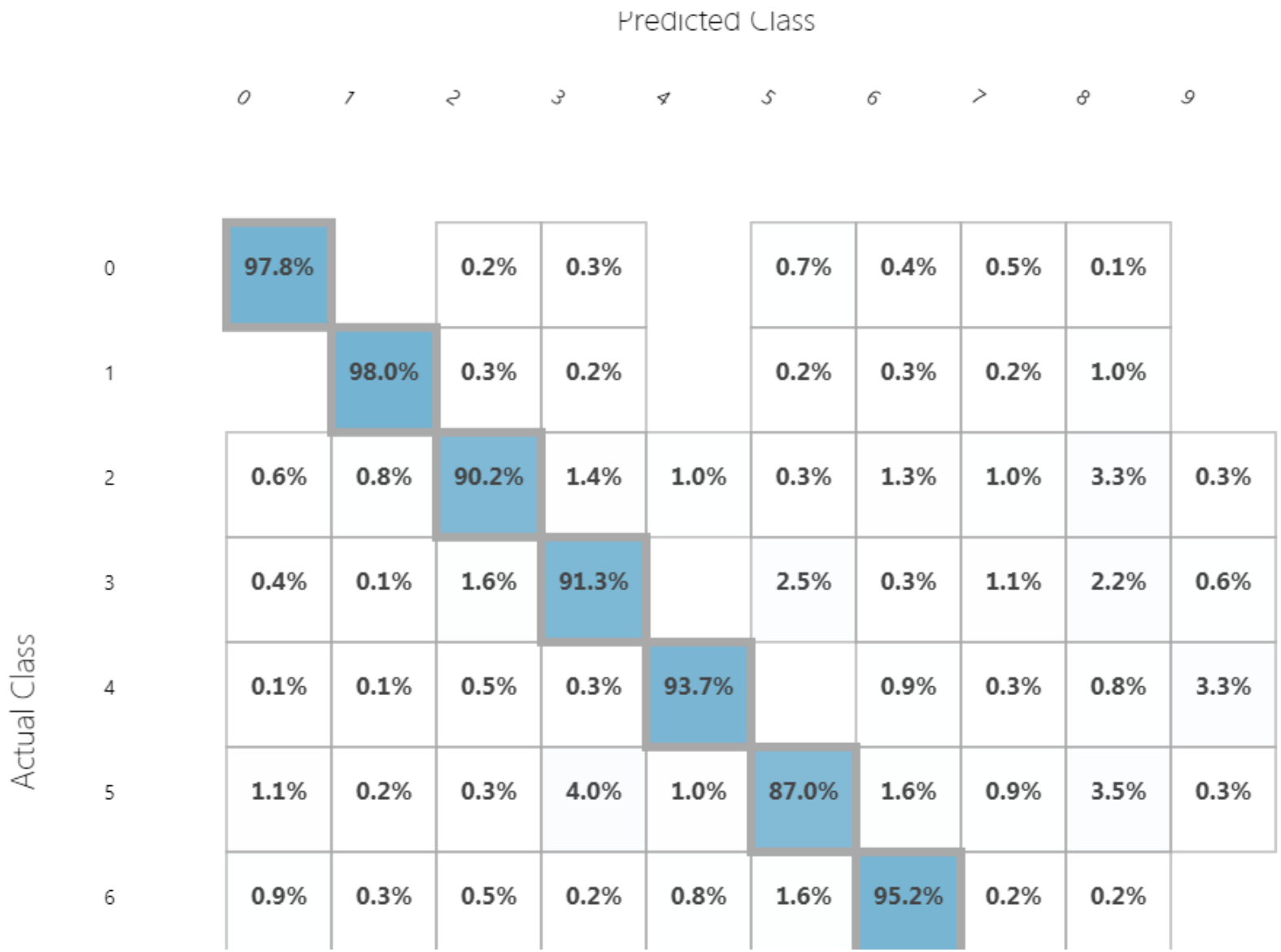


오른쪽 버튼 클릭>dataset>Visualize

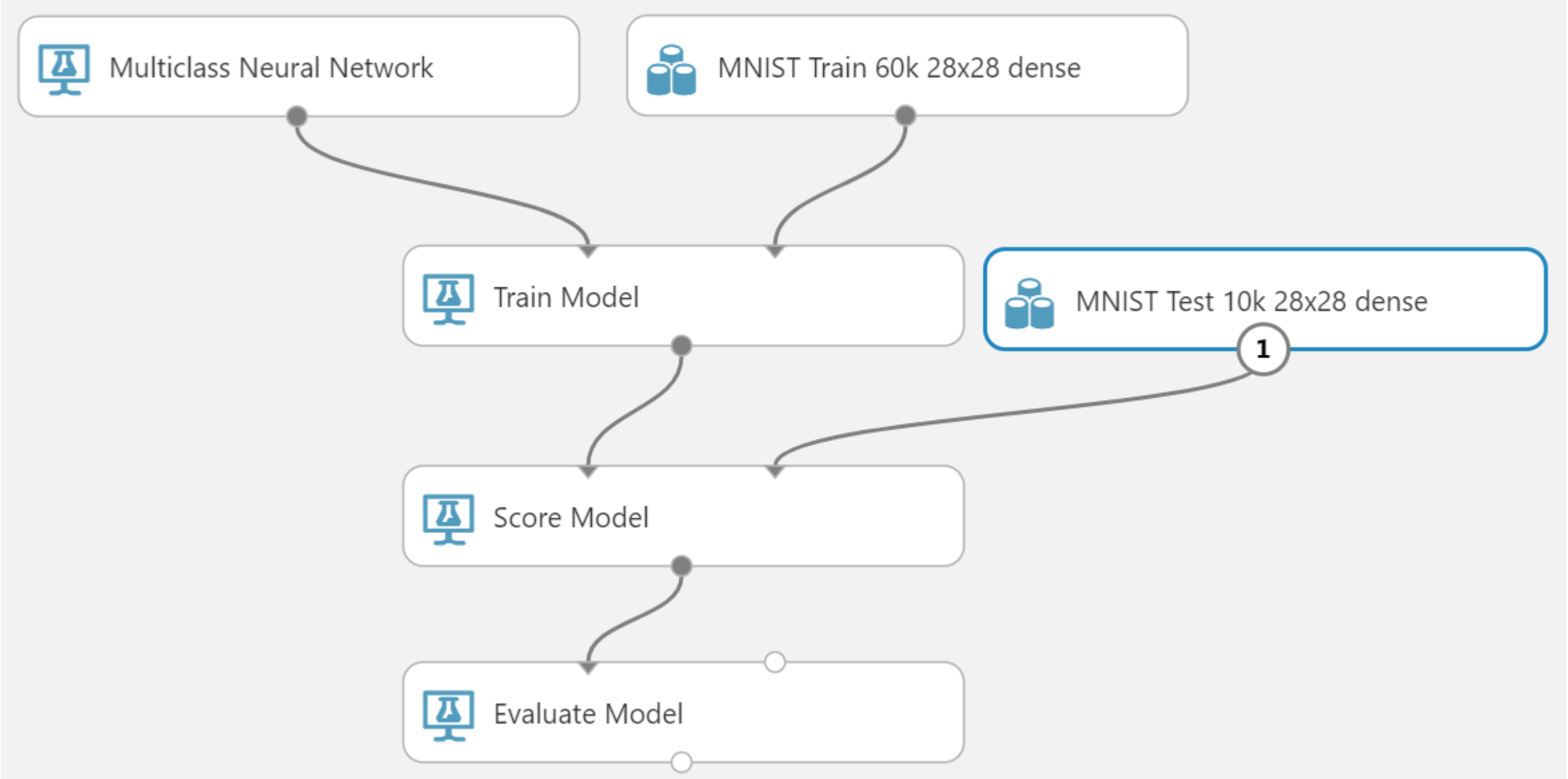
참고) f0~f783을 통해 Label을 예측한 결과를 확인

오른쪽 버튼 클릭>Scored dataset>Visualize

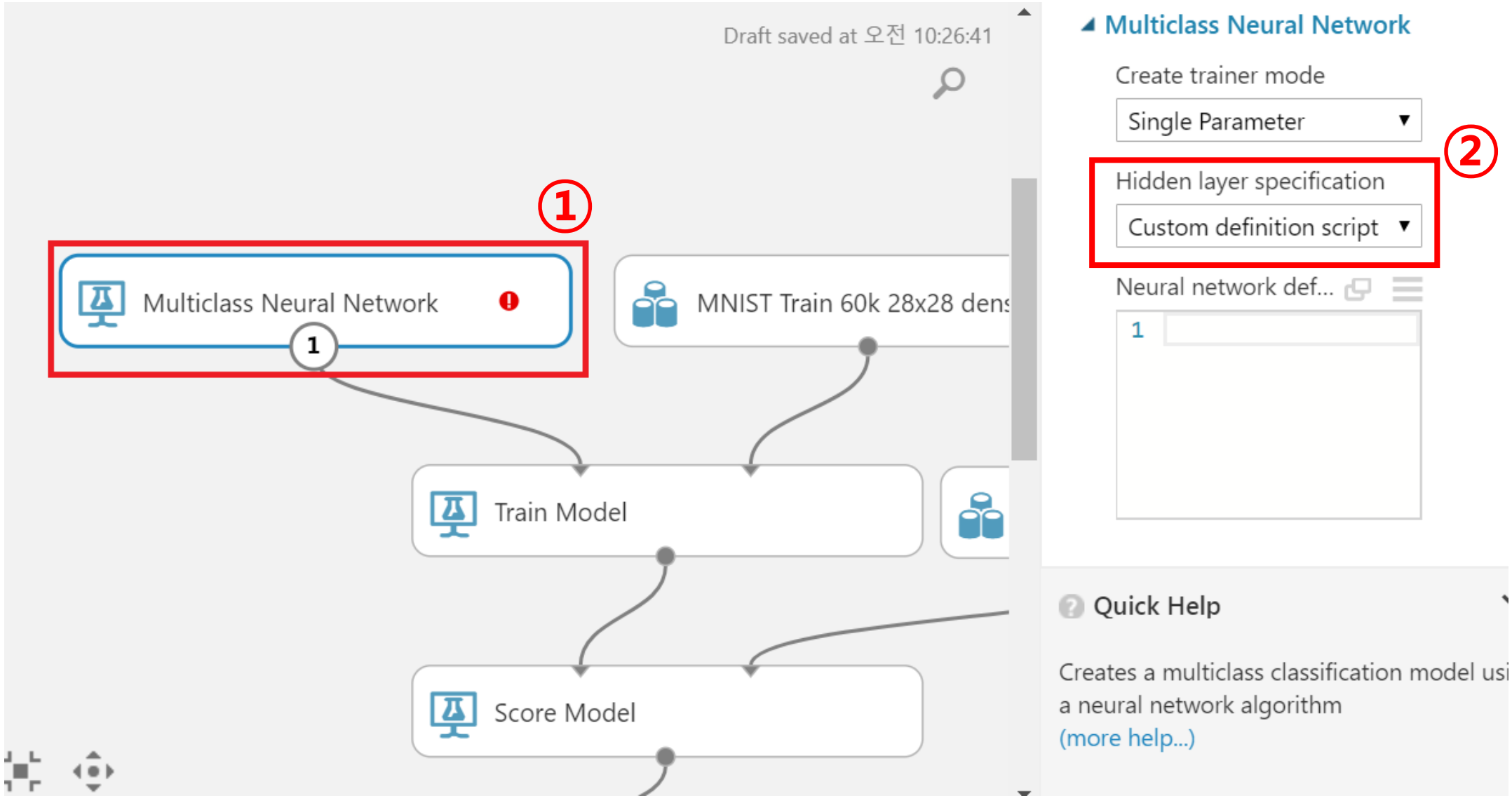
Logistic regression
결과 확인



Neural Network(1 hidden layer)



Neural Network(1 hidden layer)
Nerual Network 설정



Neural Network(1 hidden layer)
Nerual Network 설정

Properties Project

Multiclass Neural Network

Create trainer mode

Single Parameter

Hidden layer specification

Custom definition script

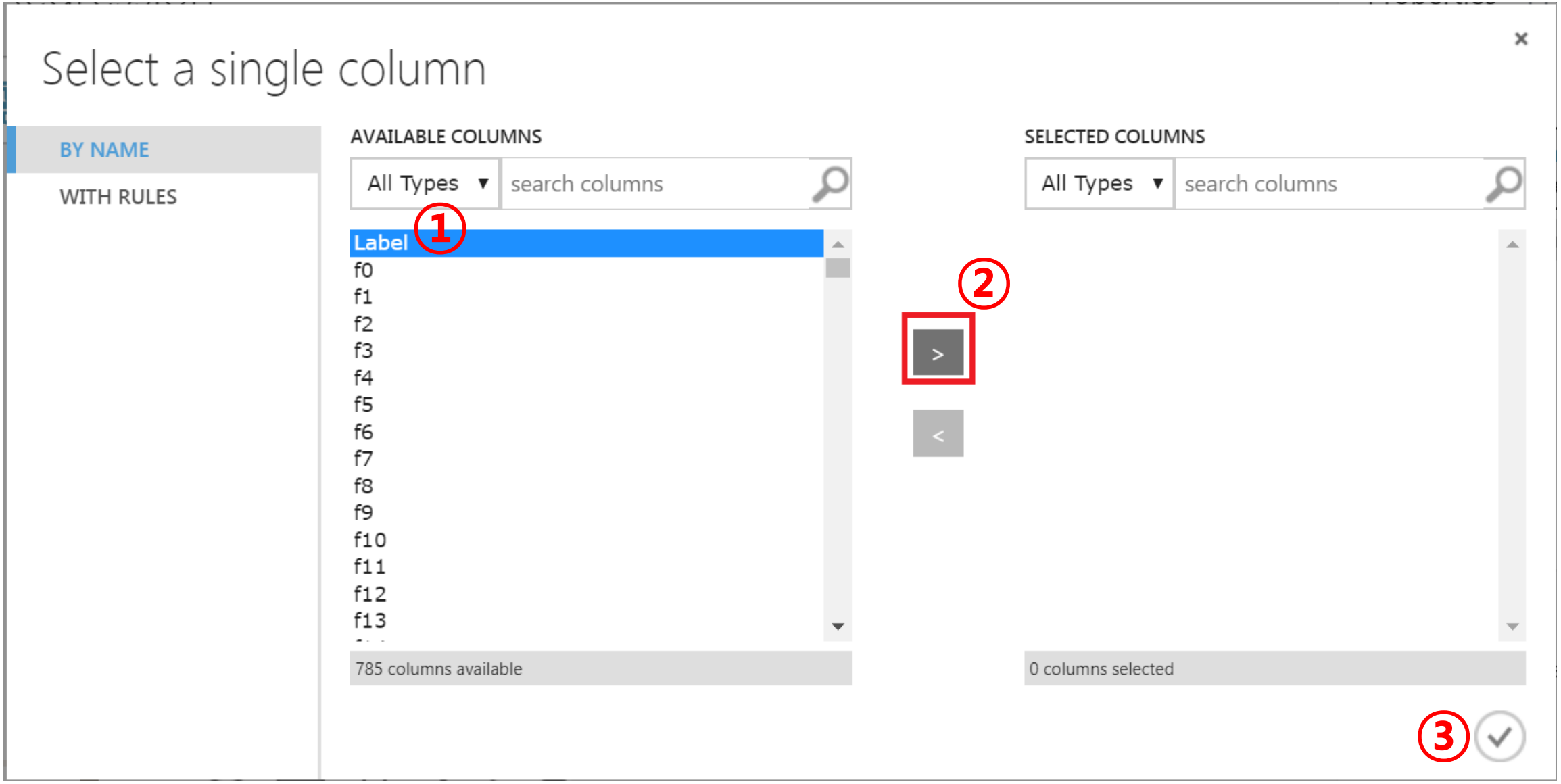
Neural network definition

```
1 input picture[28, 28];
2 hidden H [100] from picture all;
3 output result[10] sigmoid from H all;
```

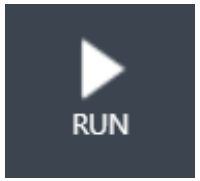
Number of learning iterations

30

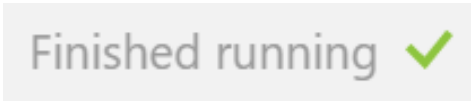
Neural Network(1 hidden layer)
Train Model



Neural Network(1 hidden layer)
결과 확인

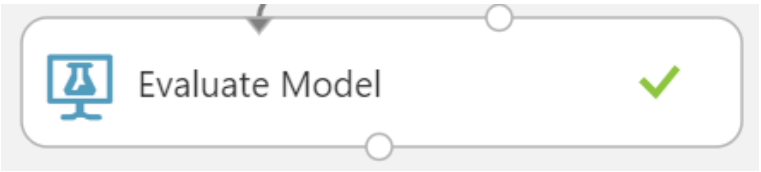


버튼을 누른 후



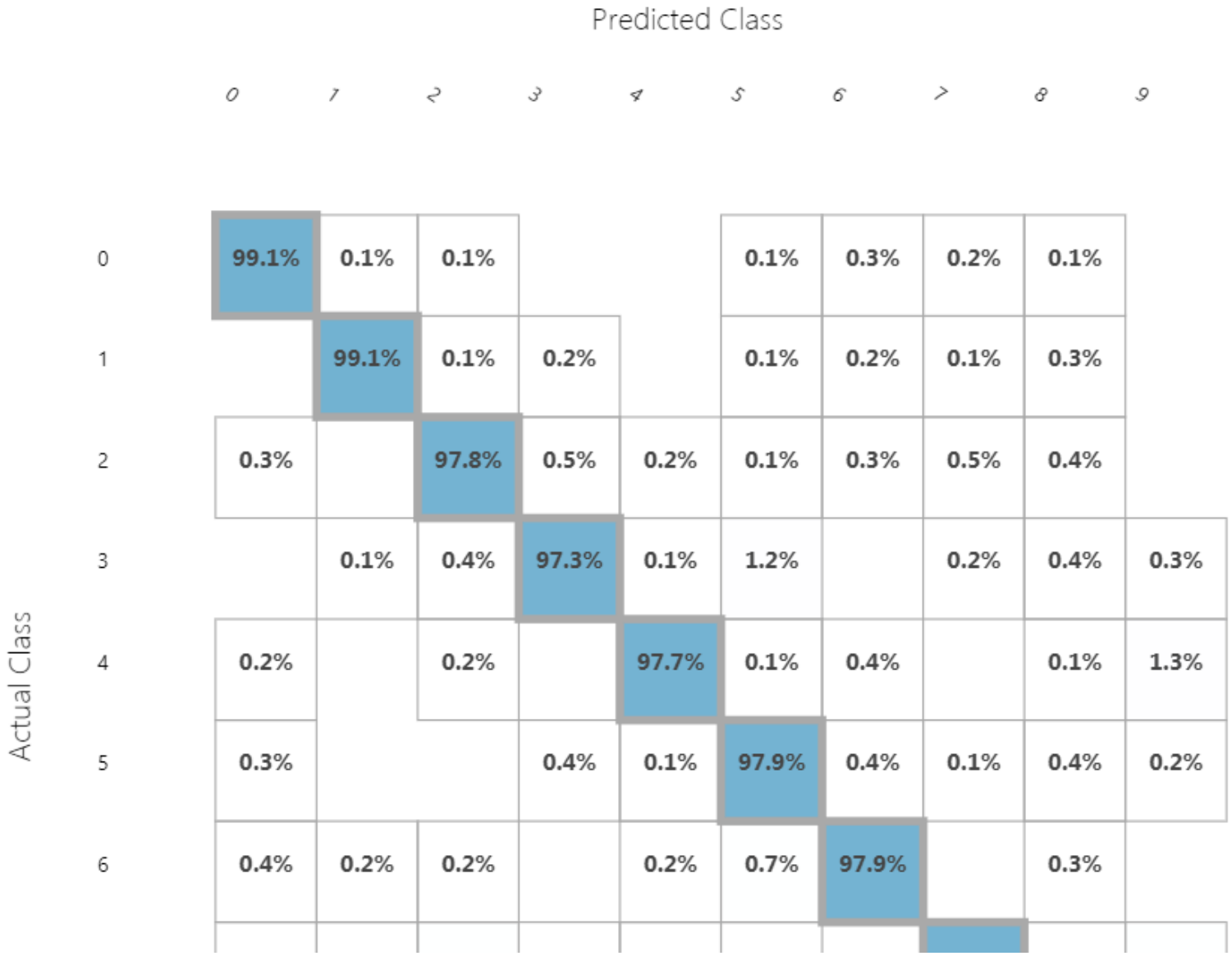
이 뜰 때까지 대기

결과 확인

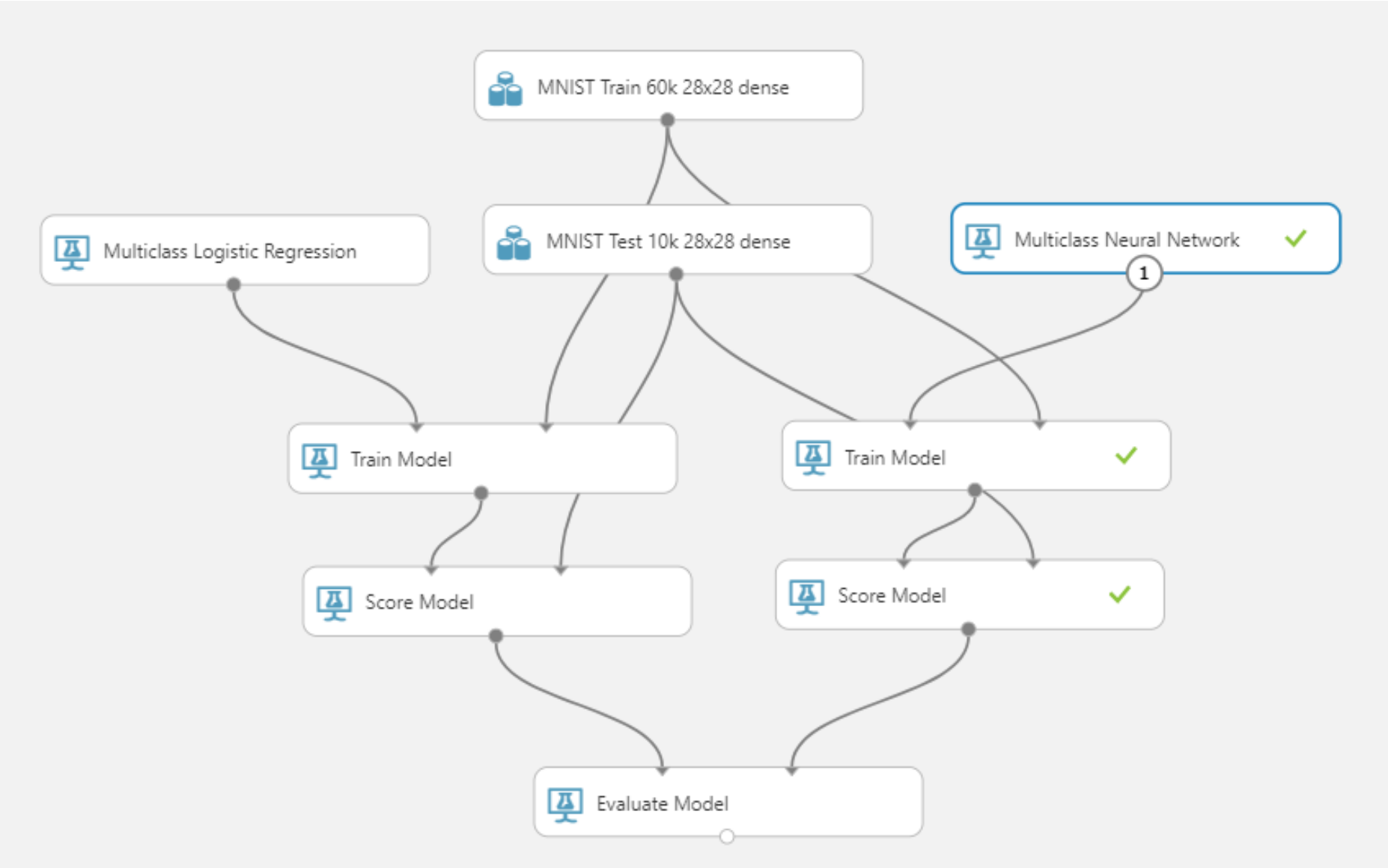


오른쪽 버튼 클릭>Evaluation results>Visualize

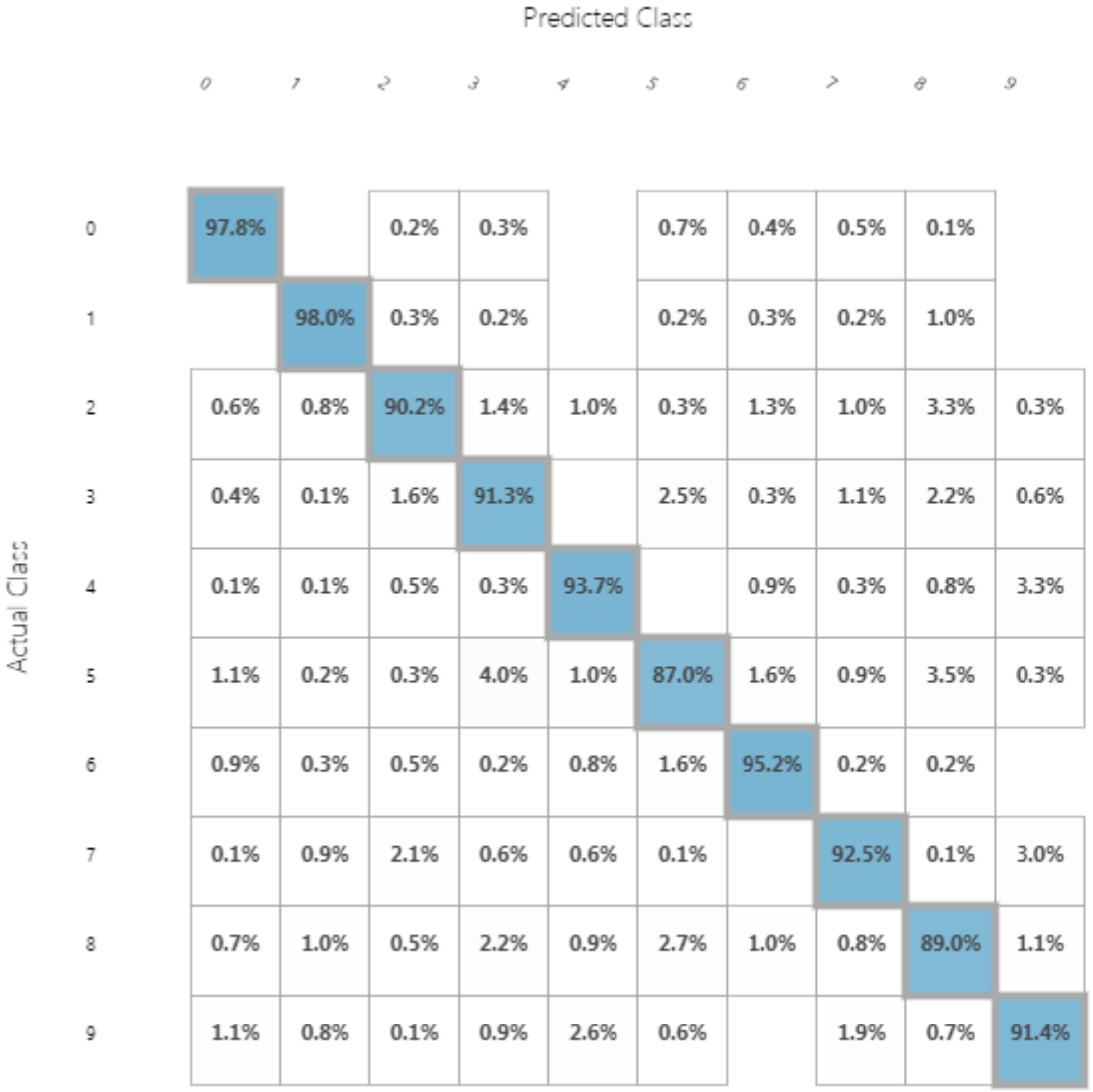
Neural Network(1 hidden layer)
결과 확인

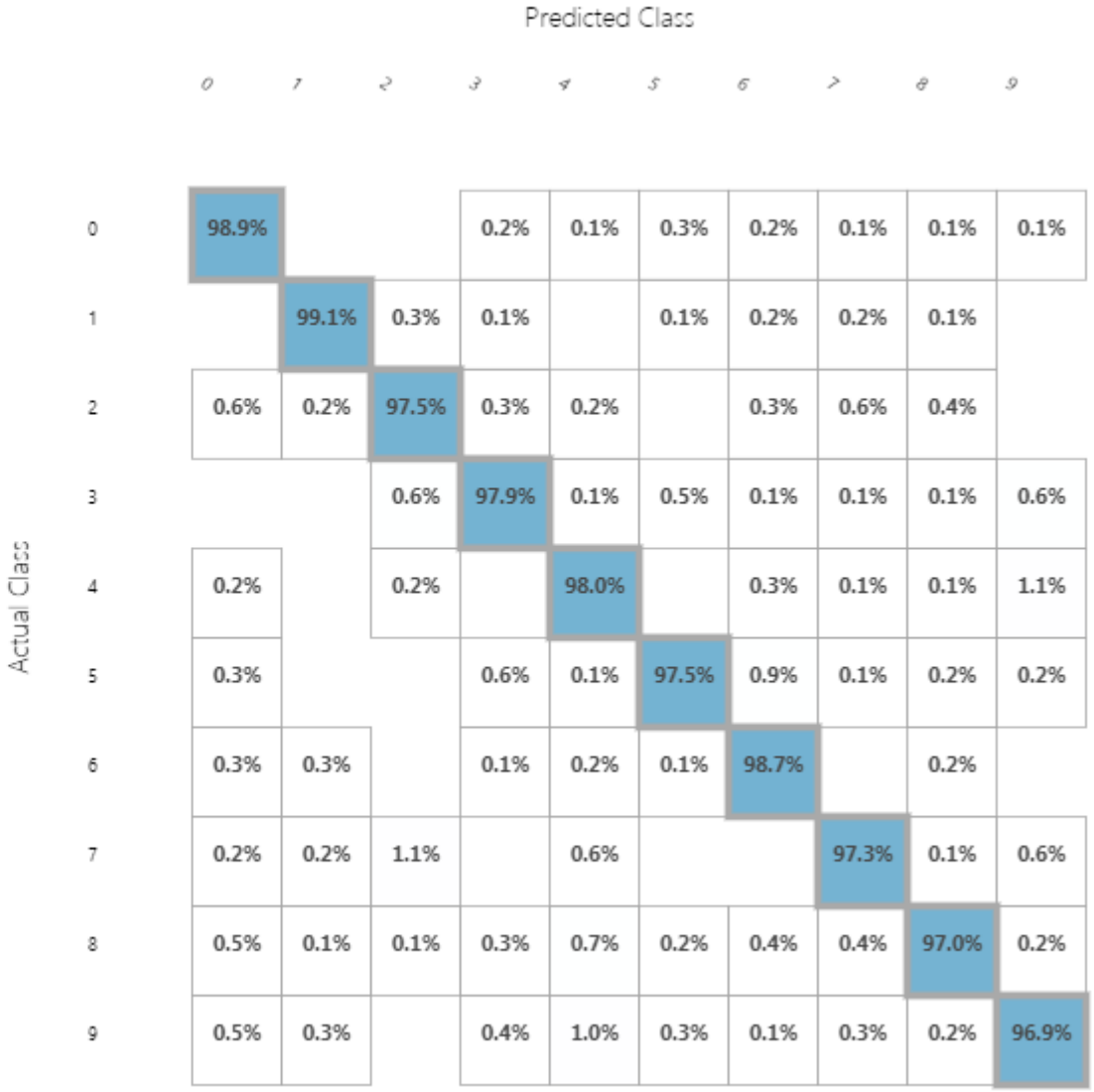


Logistic Regresion vs Neural Network(1 hidden layer)

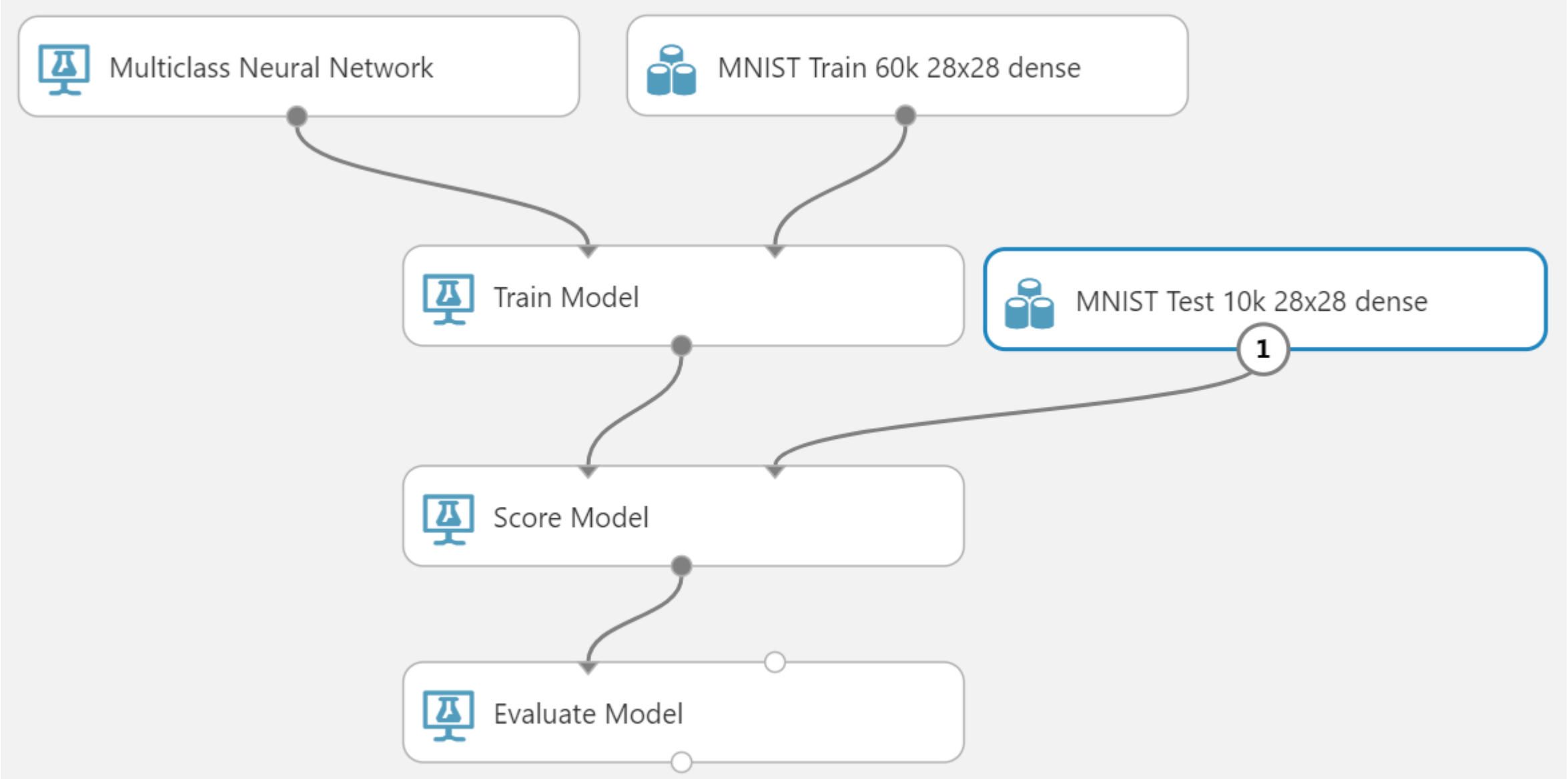


Logistic Regresion vs Neural Network(1 hidden layer)

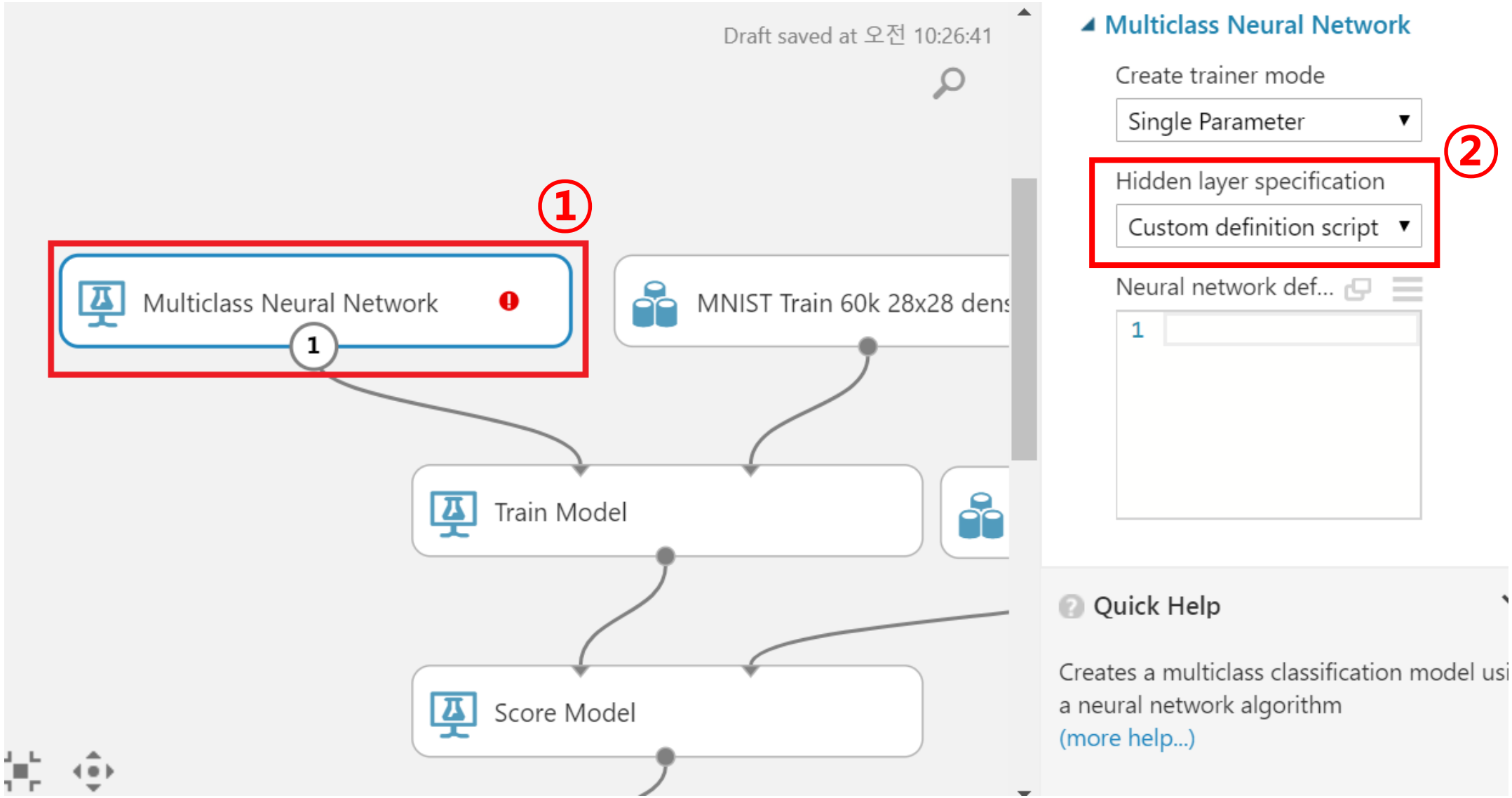




Neural Network(2 hidden layers)



Neural Network(2 hidden layers)
Nerual Network 설정



Neural Network(2 hidden layers)
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Properties Project

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Create trainer mode

Single Parameter

Hidden layer specification

Custom definition script

Neural network definition

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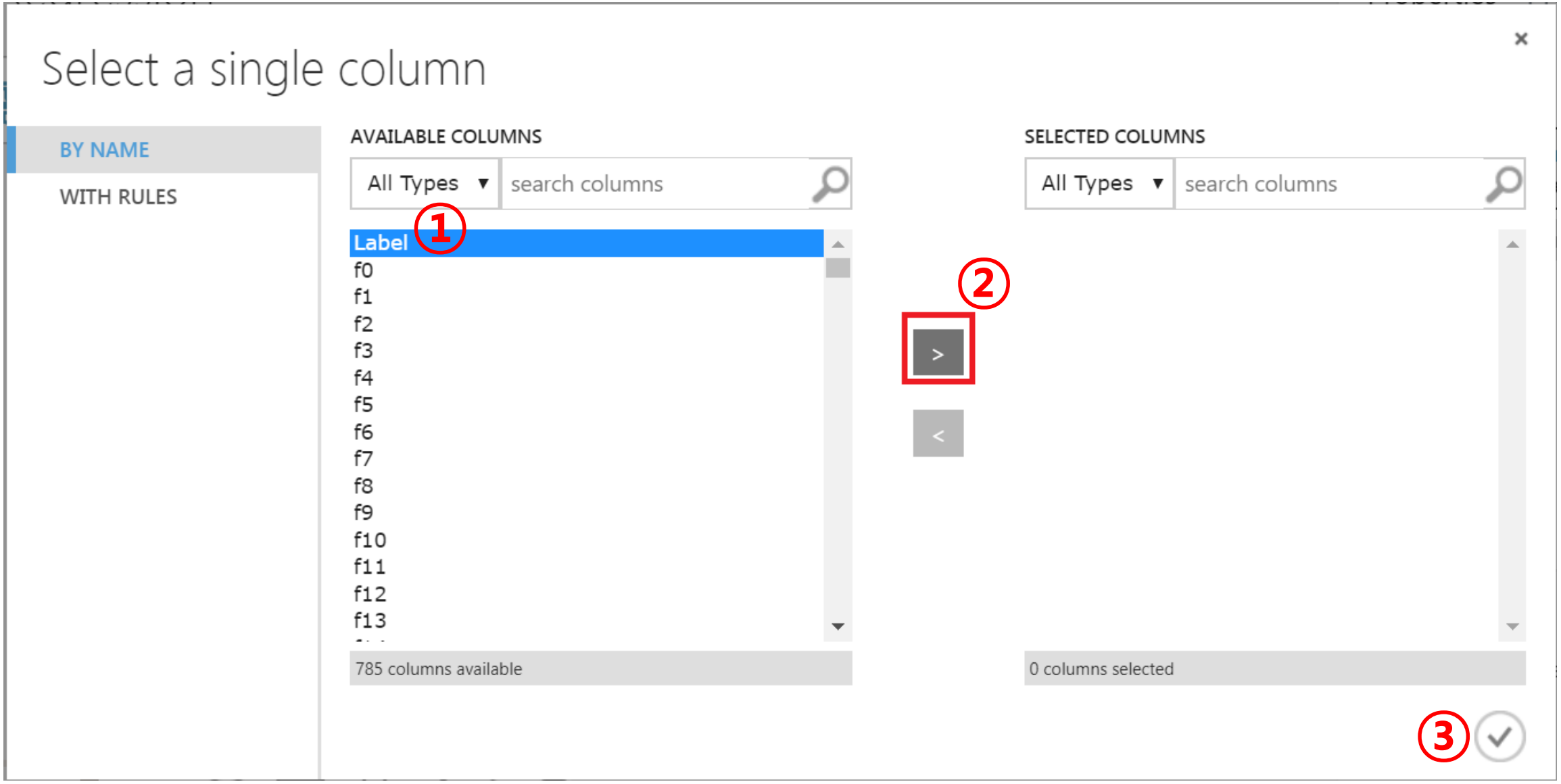
2 hidden H1 [100] from picture all;
3 hidden H2 [100] from H1 all;
4 output result[10] sigmoid from H2 all;
```

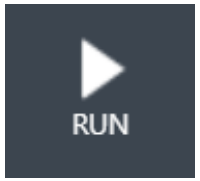
Number of learning iterations

30

Neural Network(1 hidden layer)
Train Model



Neural Network(1 hidden layer)
결과 확인



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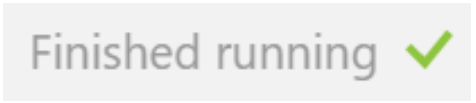
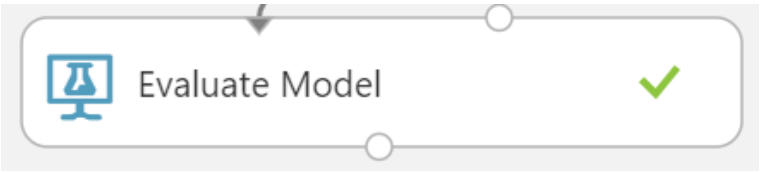


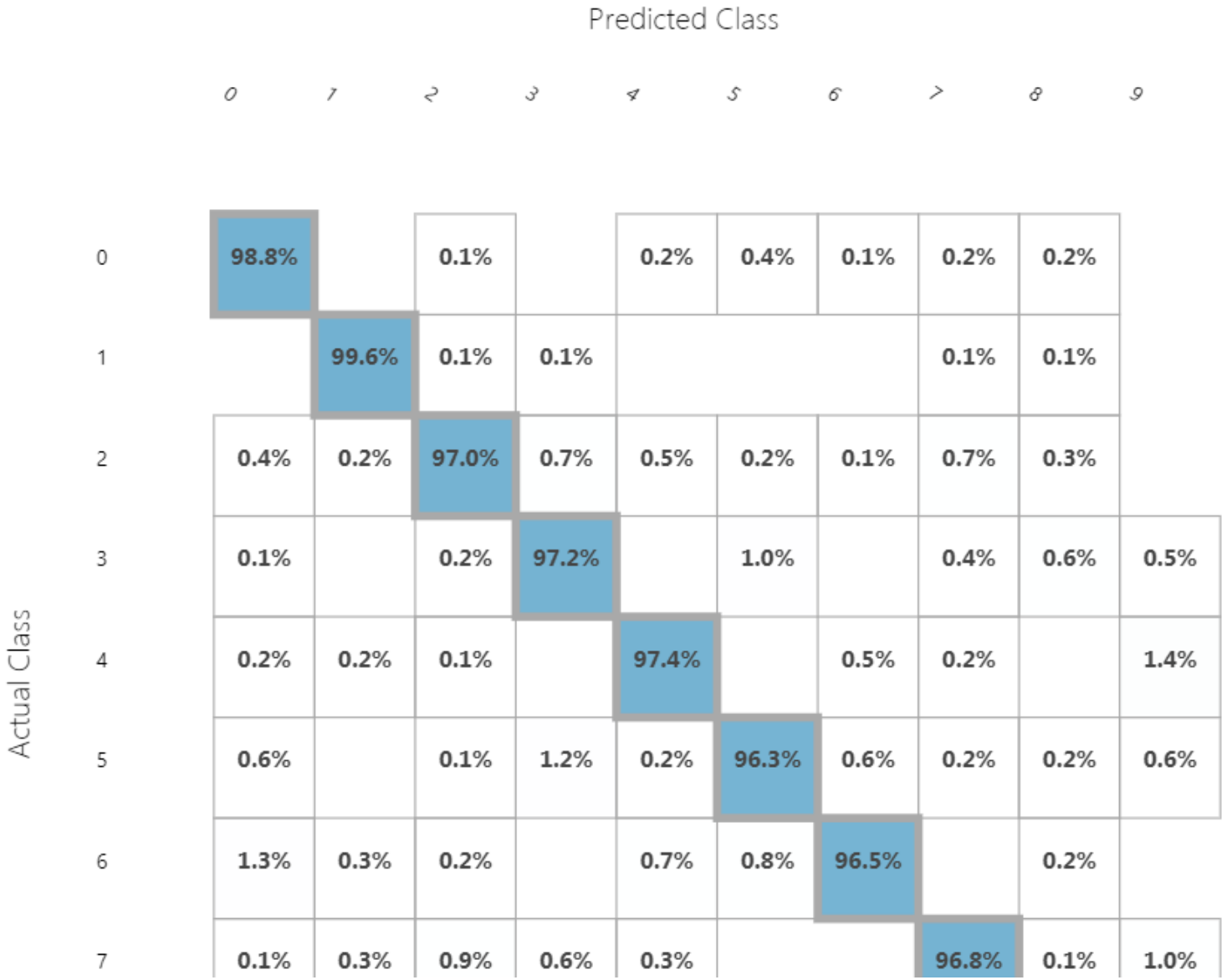
이 뜰 때까지 대기

결과 확인



오른쪽 버튼 클릭>Evaluation results>Visualize

Neural Network(1 hidden layer)
결과 확인



감사합니다☺