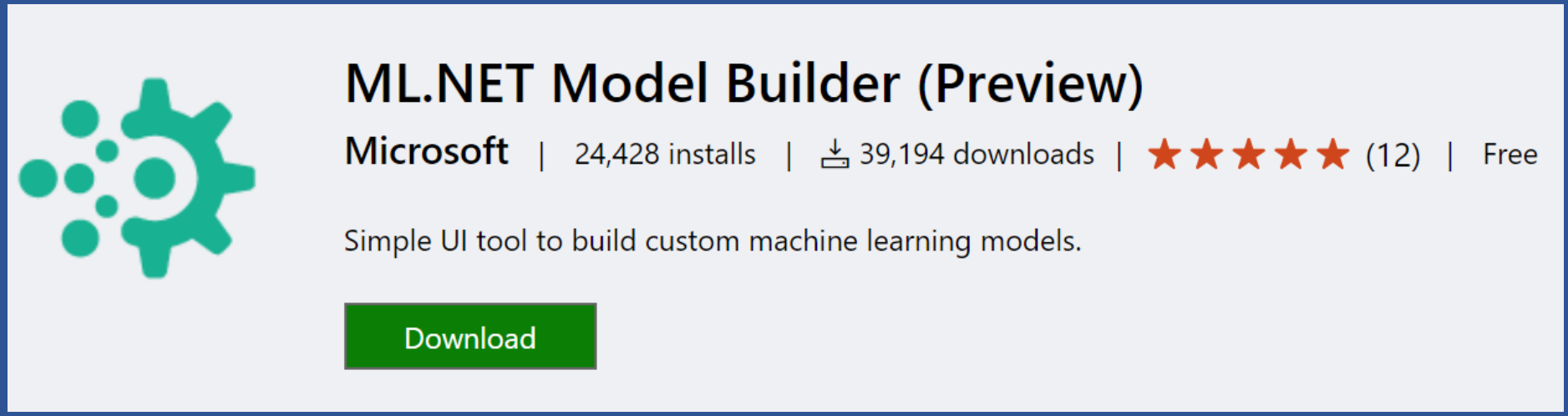
Iris AutoML

What's in this session?

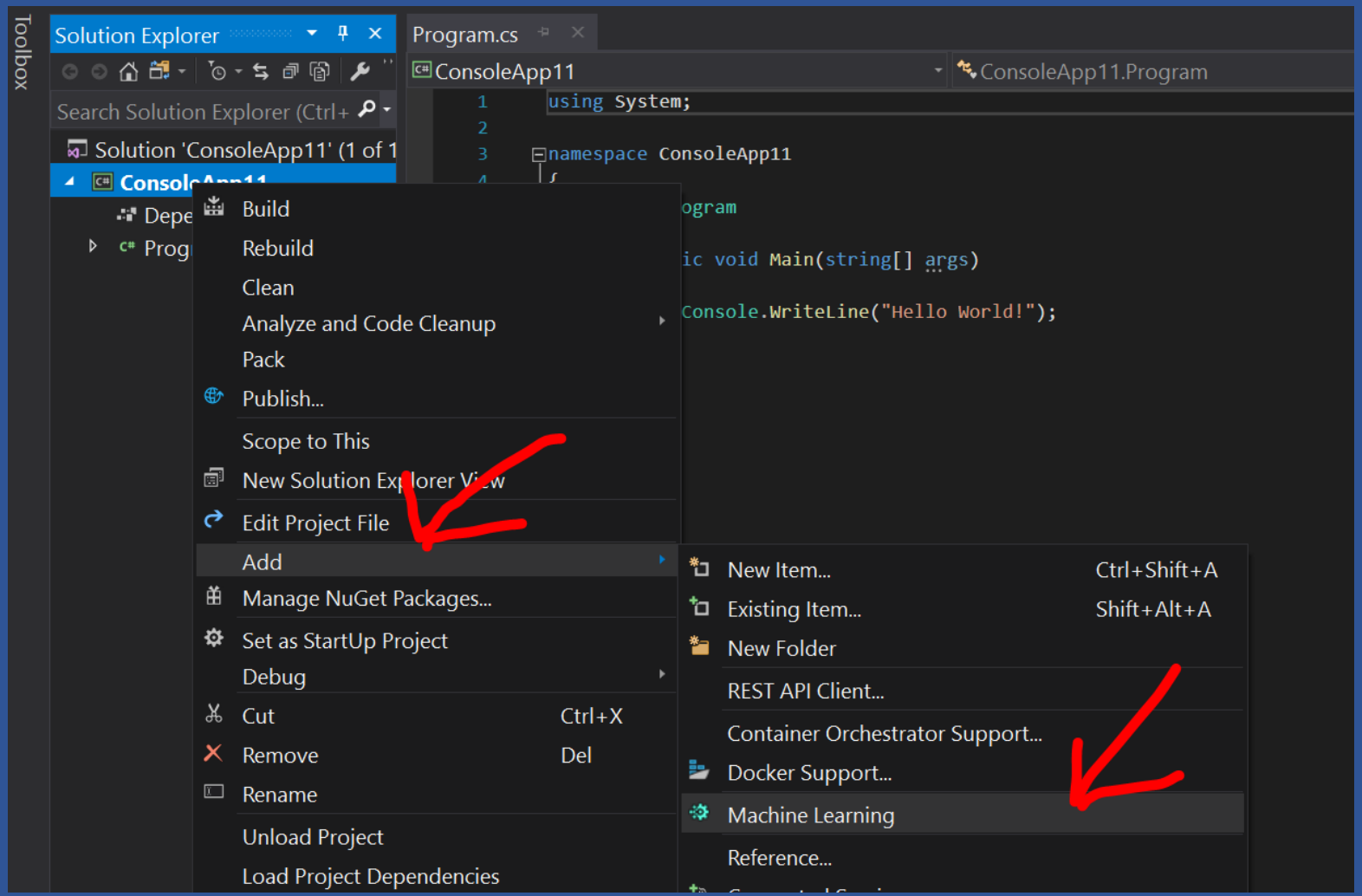
1. Install ML.NET Model Builder
2. Create new .NET CORE console project and add Machine Learning job
3. Pick a Scenario / Price Prediction
4. Set Data File
5. Set train time
6. Understand Train result
7. Understand evaluation result
8. Generate Code
9. Examine Code

Install ML.NET Model Builder

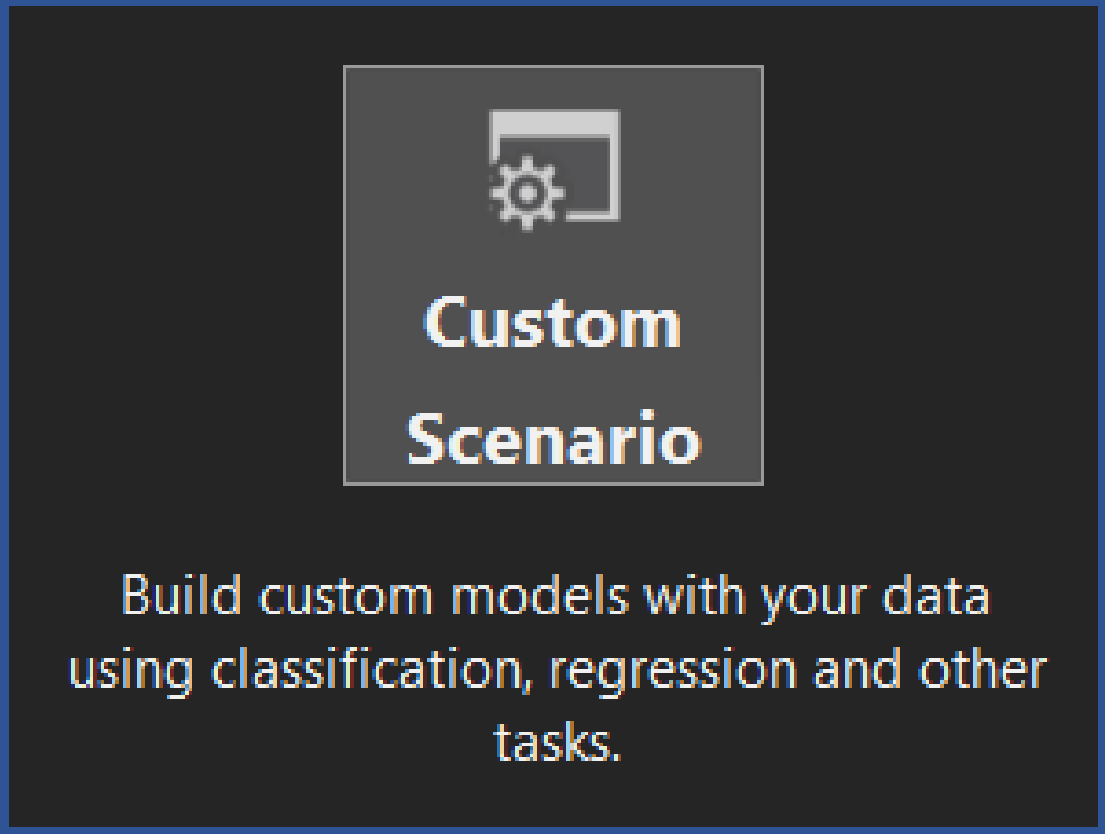
https://marketplace.visualstudio.com/items?itemName=MLNET.07



Create new .NET CORE console project and add Machine Learning

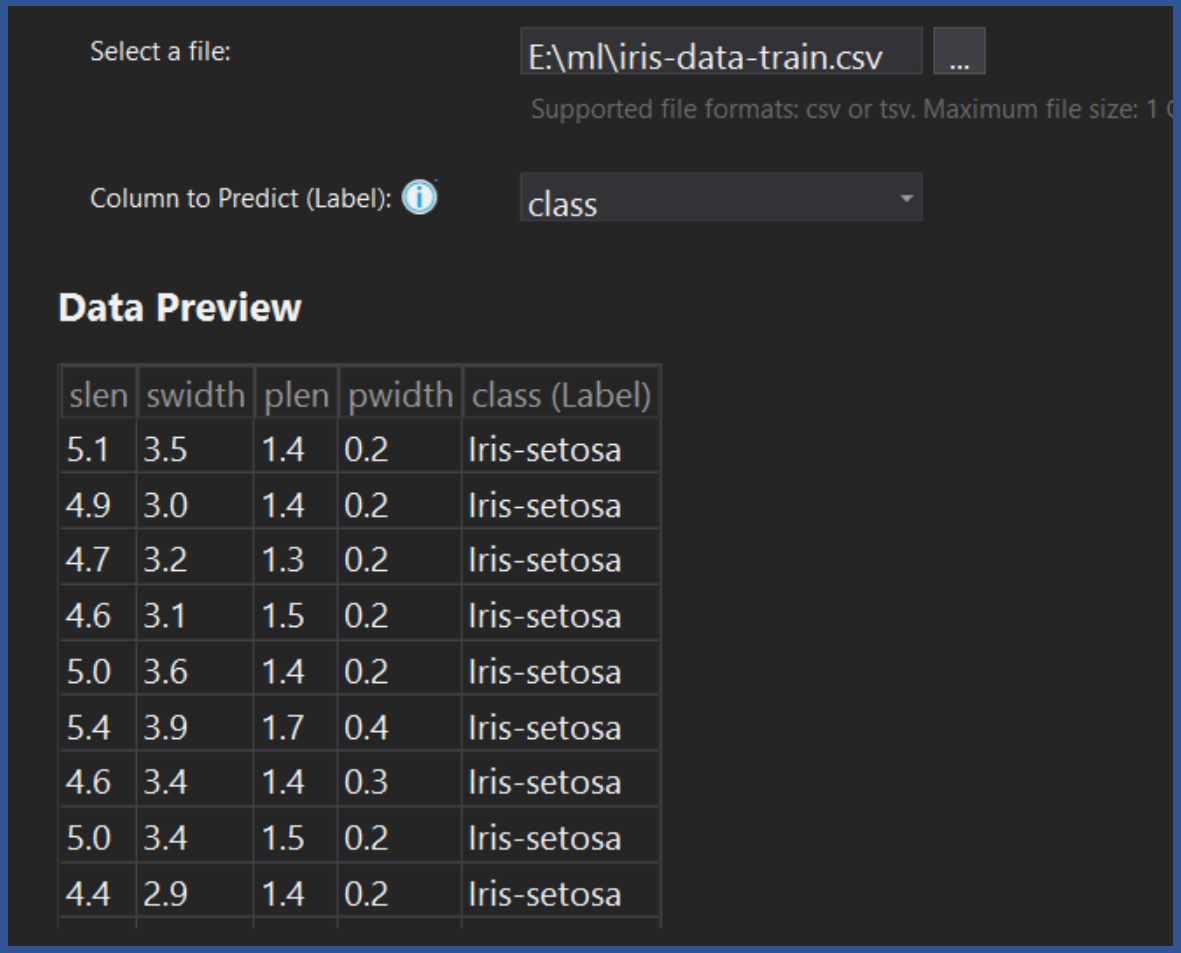


Pick a Scenario / Custom Scenario



Set Data File

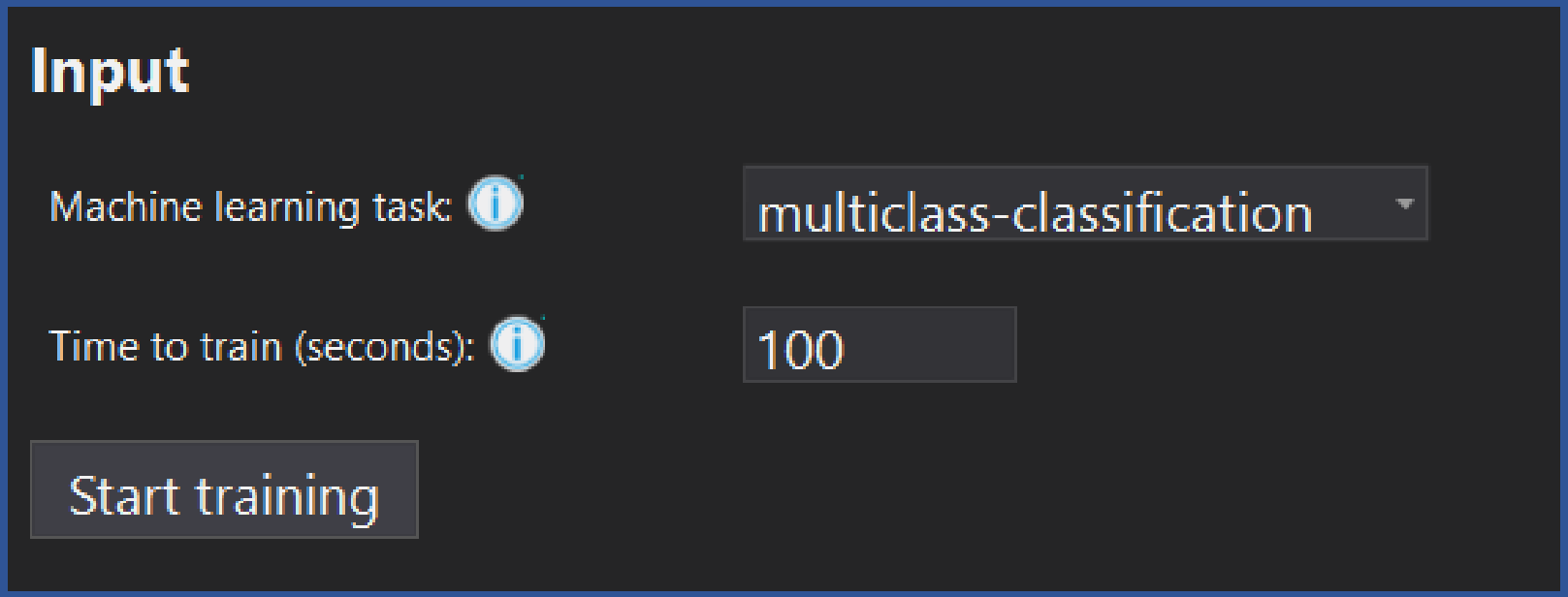
Data / File /iris-data-train.csv
Label column name = class



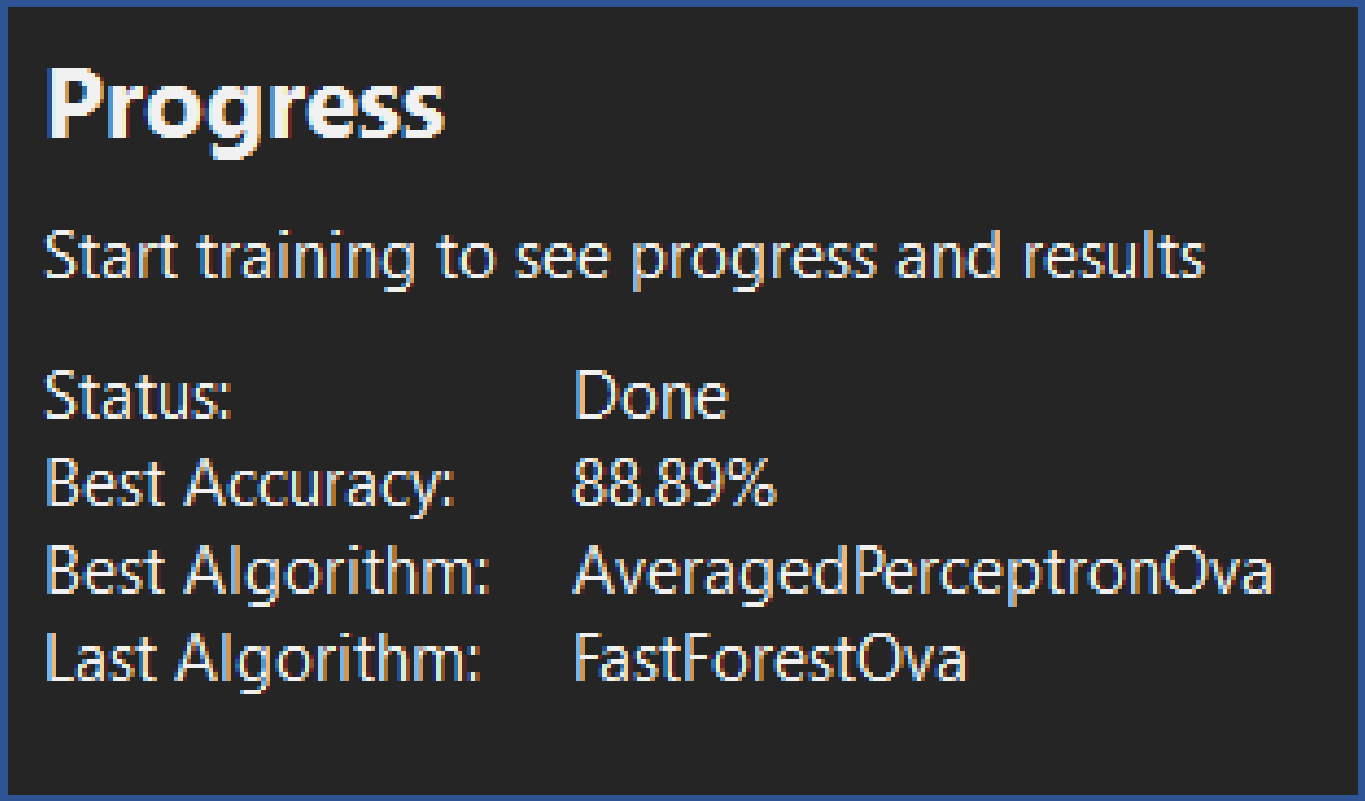
slen	swidth	plen	pwidth	class (Label)
5.1	3.5	1.4	0.2	Iris-setosa
4.9	3.0	1.4	0.2	Iris-setosa
4.7	3.2	1.3	0.2	Iris-setosa
4.6	3.1	1.5	0.2	Iris-setosa
5.0	3.6	1.4	0.2	Iris-setosa
5.4	3.9	1.7	0.4	Iris-setosa
4.6	3.4	1.4	0.3	Iris-setosa
5.0	3.4	1.5	0.2	Iris-setosa
4.4	2.9	1.4	0.2	Iris-setosa

Task = multiclass-classification

Time = 100 seconds



Understand the Train result



Understand evaluation result

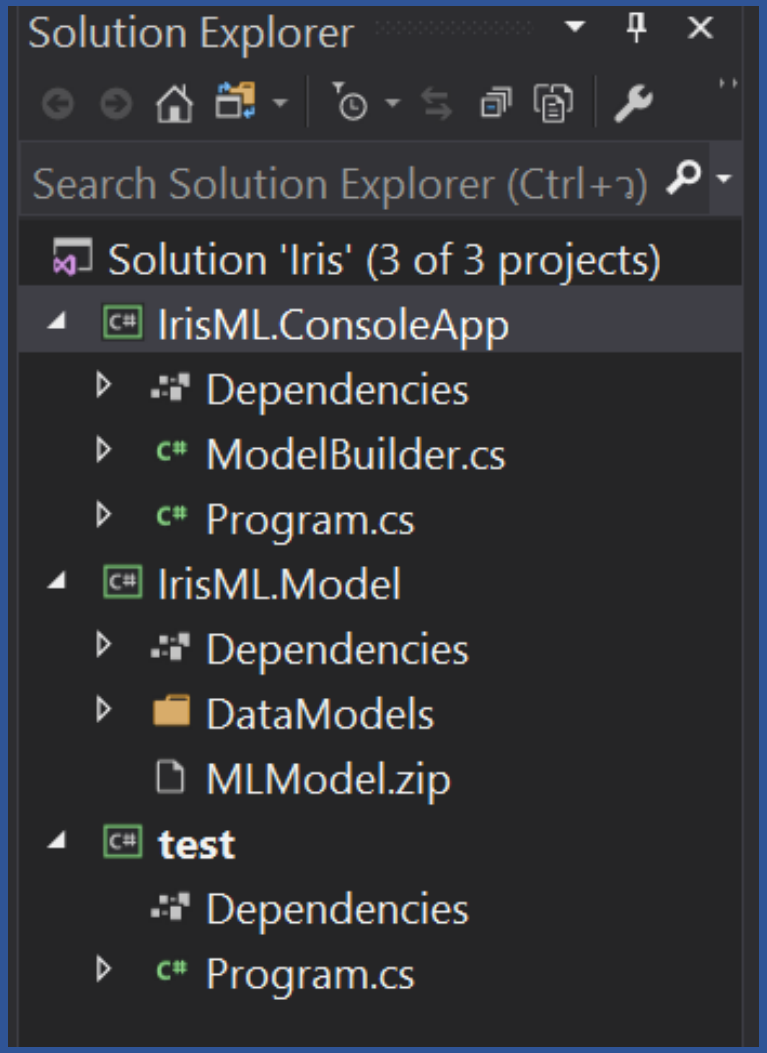
Output

ML Task:	multiclass-classification
Dataset:	iris-data-train.csv
Column to Predict (Label):	class
Best Model:	AveragedPerceptronOva
Best Model Accuracy:	88.89%
Training Time:	100.31 seconds
Models Explored (Total):	234

Top 5 models explored

Rank	Trainer	MicroAccuracy	MacroAccuracy	Duration
1	AveragedPerceptronOva	0.8889	0.9000	0.7
2	SdcaMaximumEntropyMulti	0.8889	0.9000	0.2
3	LightGbmMulti	0.8889	0.9000	0.2
4	FastTreeOva	0.8889	0.9000	0.3
5	LinearSvmOva	0.8889	0.9000	0.1

Examine Code



Next Step

Write Code to build, train, evaluate, and use ML model