Spam

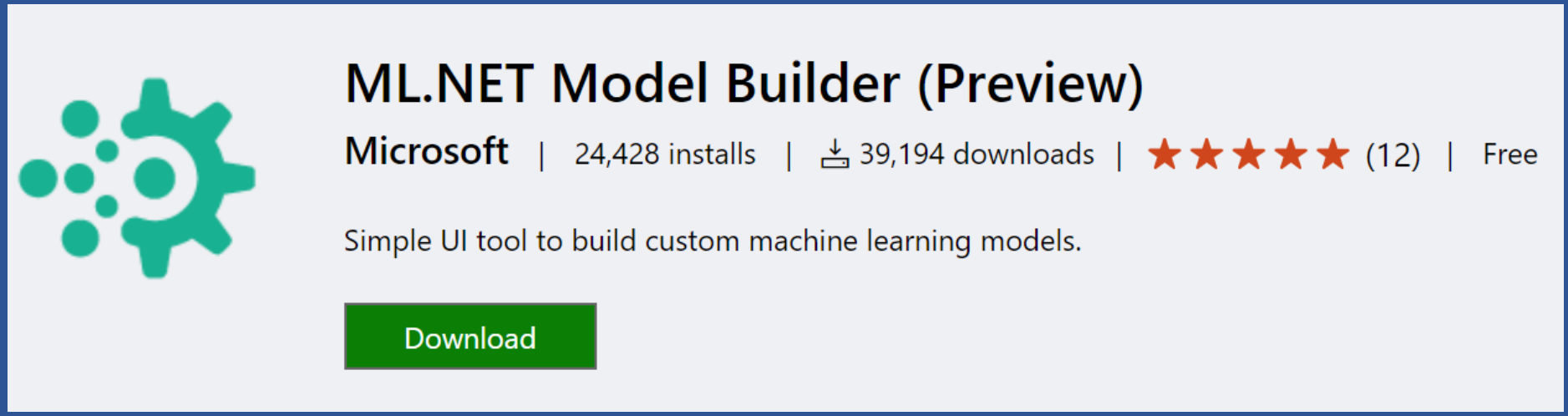
AutoML

What's in this session?

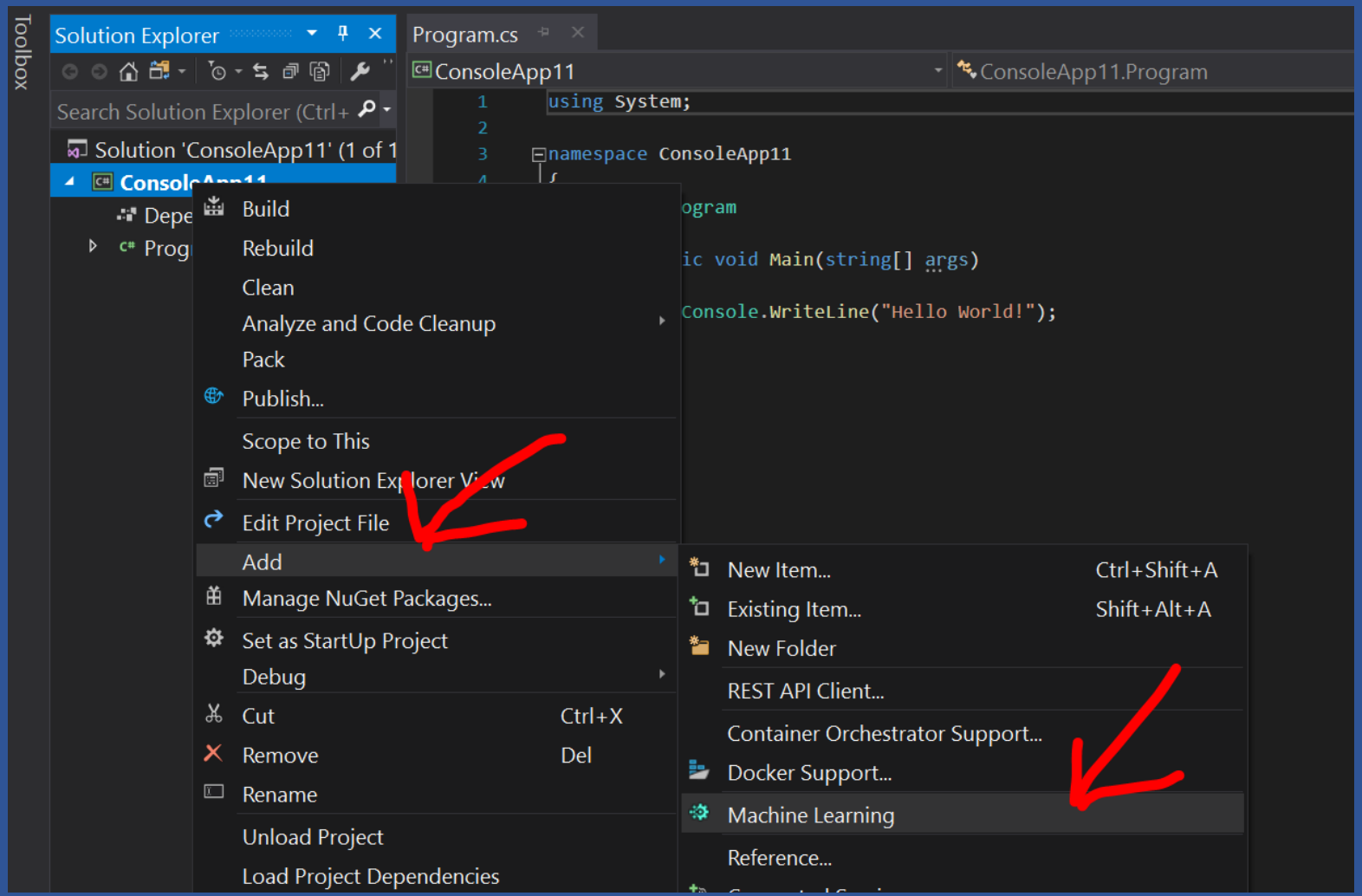
1. Install ML.NET Model Builder
2. Create new .NET CORE console project and add Machine Learning job
3. Pick a Scenario / Price Prediction
4. Set Data File
5. Set train time
6. Understand Train result
7. Understand evaluation result
8. Generate Code
9. Examine Code

Install ML.NET Model Builder

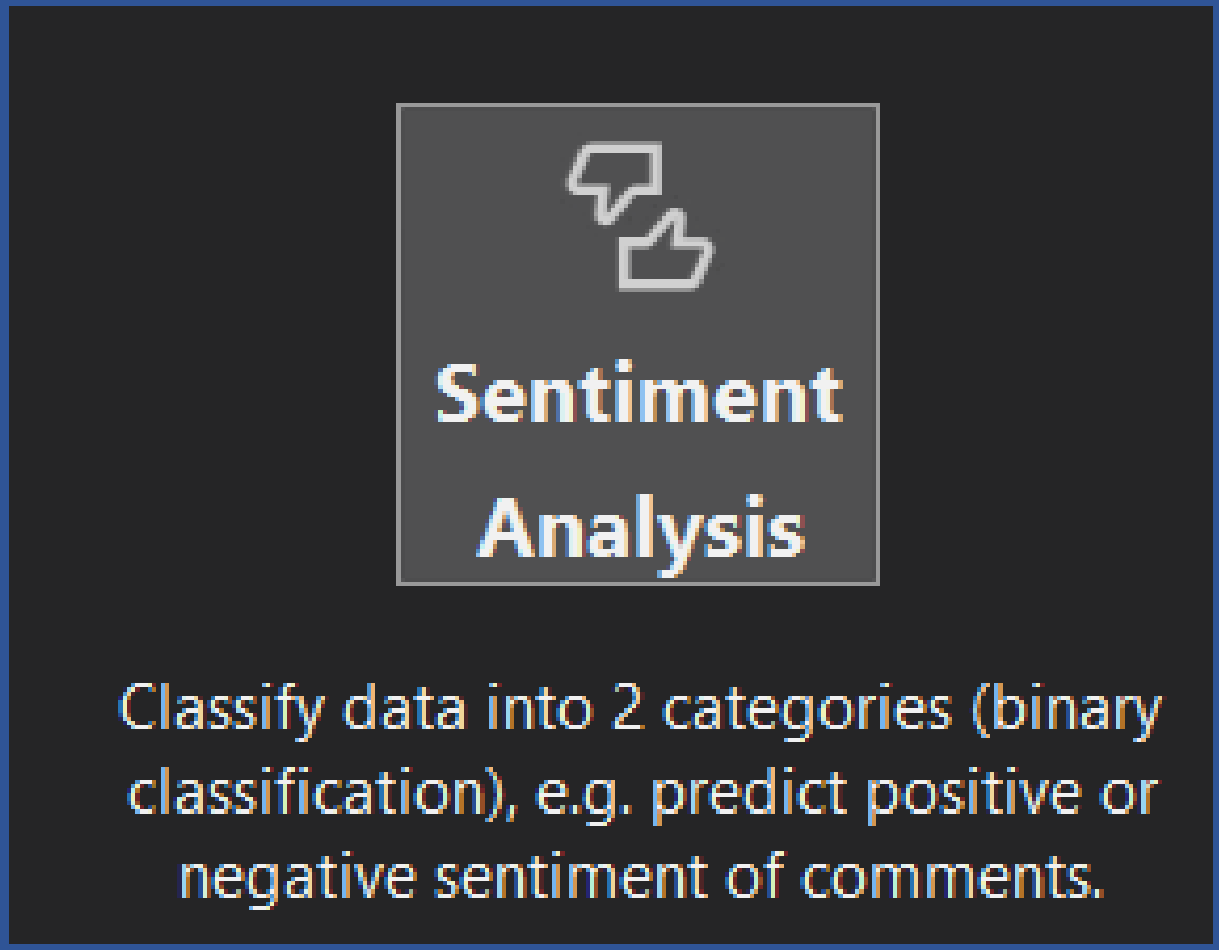
https://marketplace.visualstudio.com/items?itemName=MLNET.07



Create new .NET CORE console project and add Machine Learning

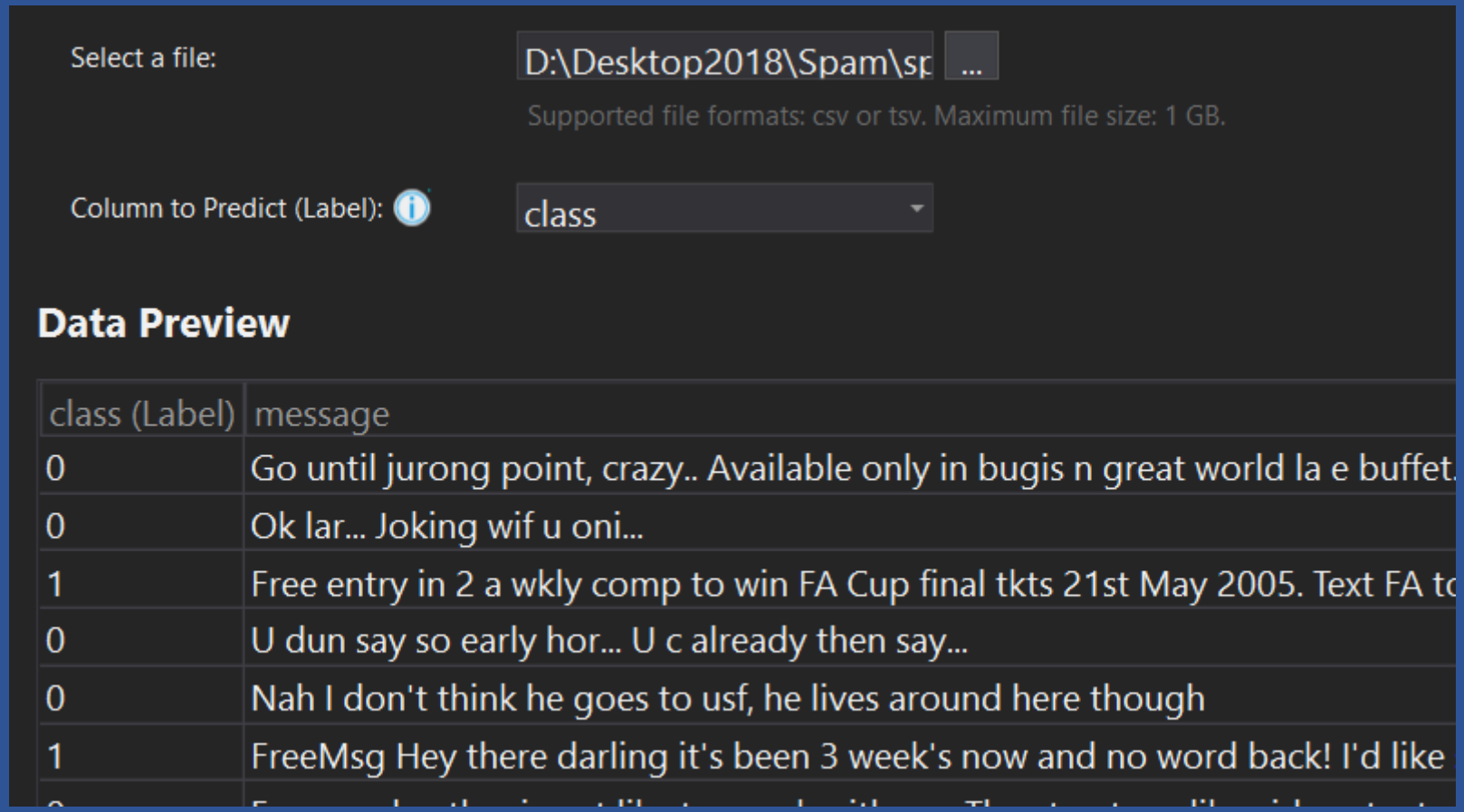


Pick a Scenario / Custom Scenario



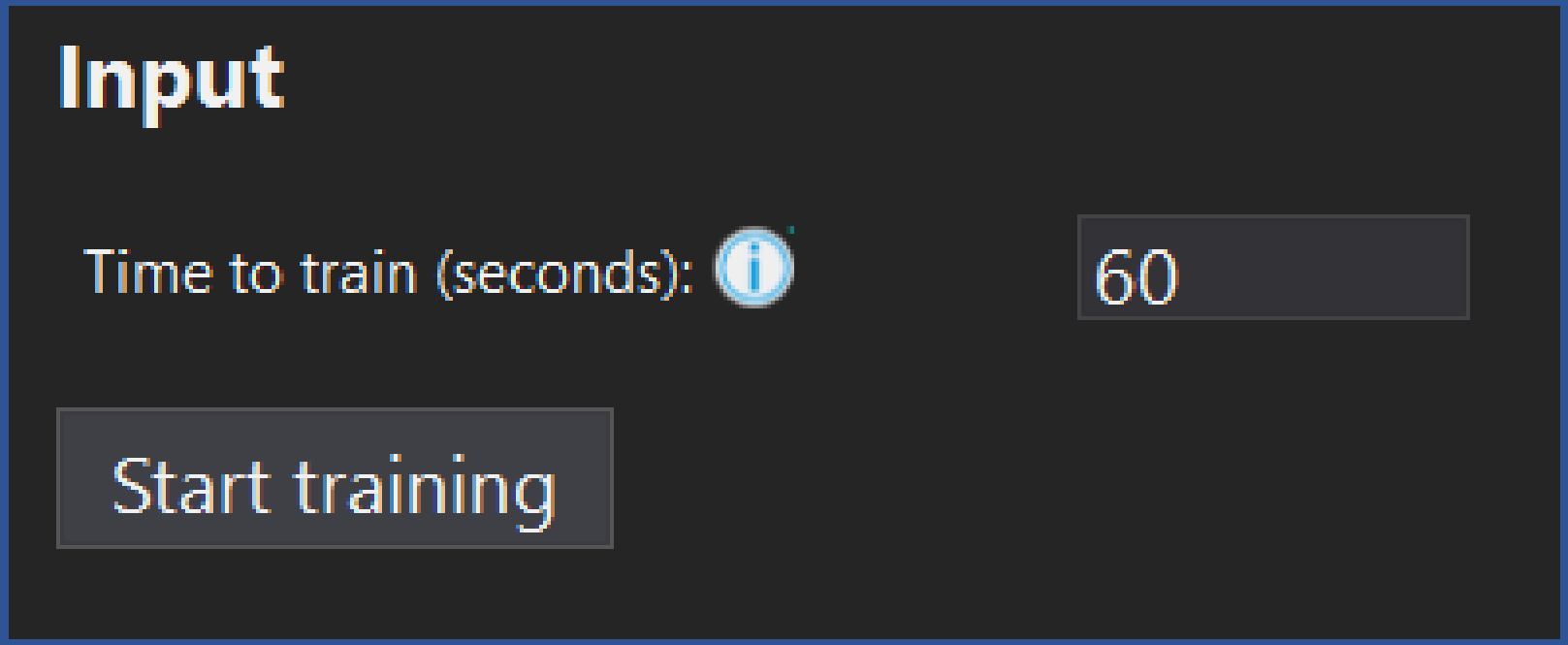
Set Data File

Data / File spam-train -autoML.tsv
Label column name = class
class 0 = ham 1 = spam

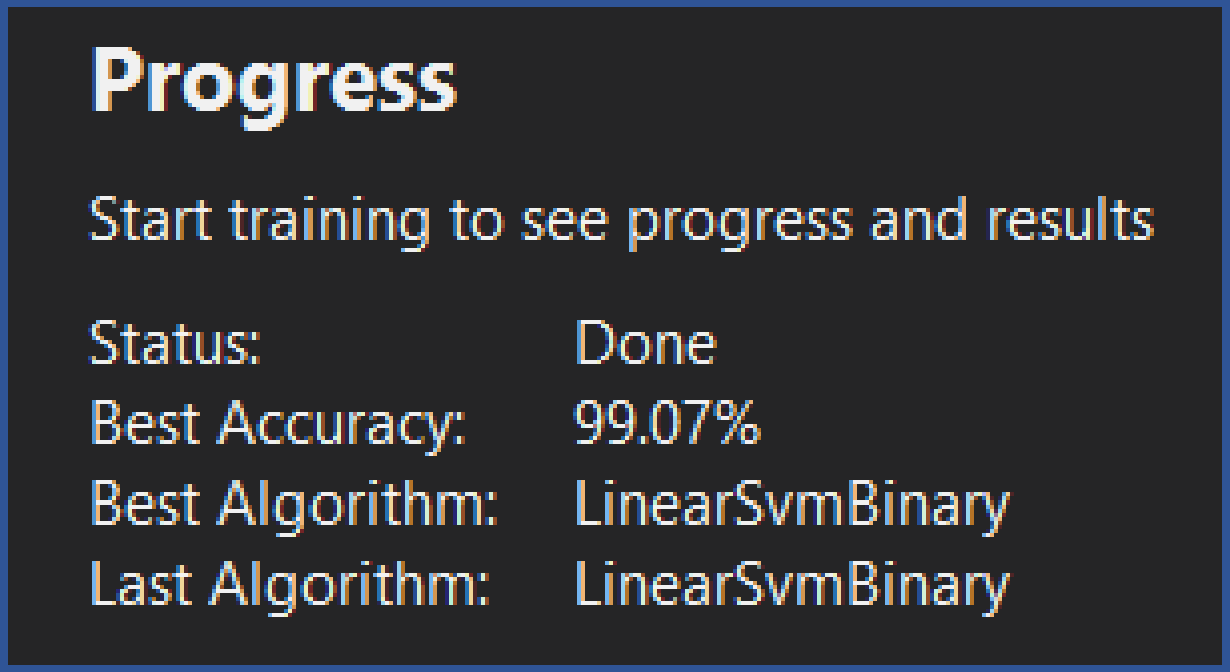


Task = multiclass-classification

Time = 60 seconds



Understand the Train result



Understand evaluation result

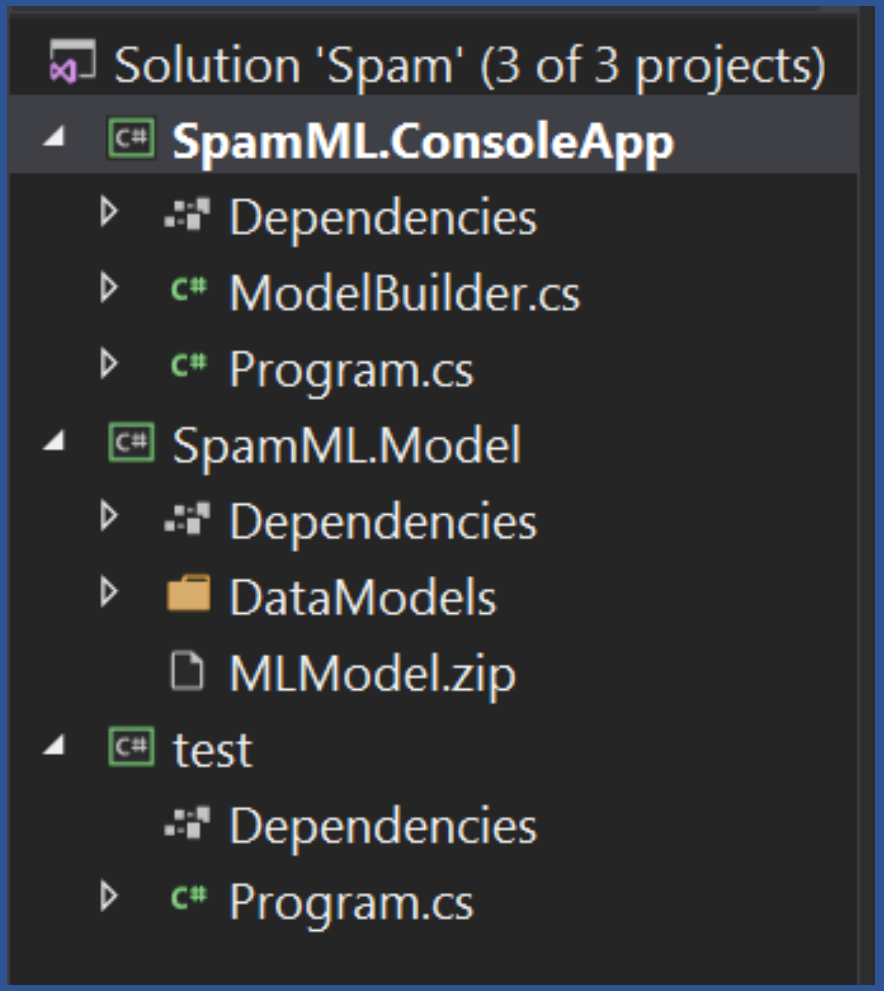
Output

ML Task:	binary-classification
Dataset:	spam-train
Column to Predict (Label):	class
Best Model:	LinearSvmBinary
Best Model Accuracy:	99.07%
Training Time:	60.47 seconds
Models Explored (Total):	19

Top 5 models explored

Rank	Trainer	Accuracy	AUC	AUPRC	F1-score	Duration
1	LinearSvmBinary	0.9907	0.9937	0.9812	0.9667	0.3
2	SgdCalibratedBinary	0.9884	0.9923	0.9769	0.9580	0.4
3	SgdCalibratedBinary	0.9884	0.9922	0.9768	0.9580	0.4
4	LinearSvmBinary	0.9884	0.9943	0.9832	0.9580	0.4
5	SgdCalibratedBinary	0.9884	0.9914	0.9749	0.9580	0.3

Examine Code



Next Step

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