Credit card

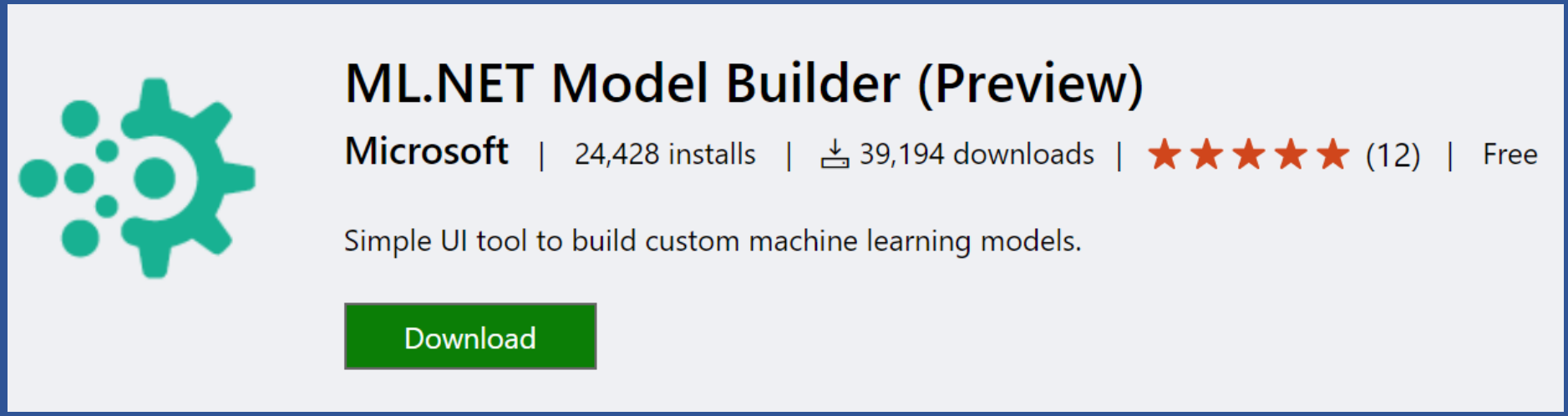
AutoML

What's in this session?

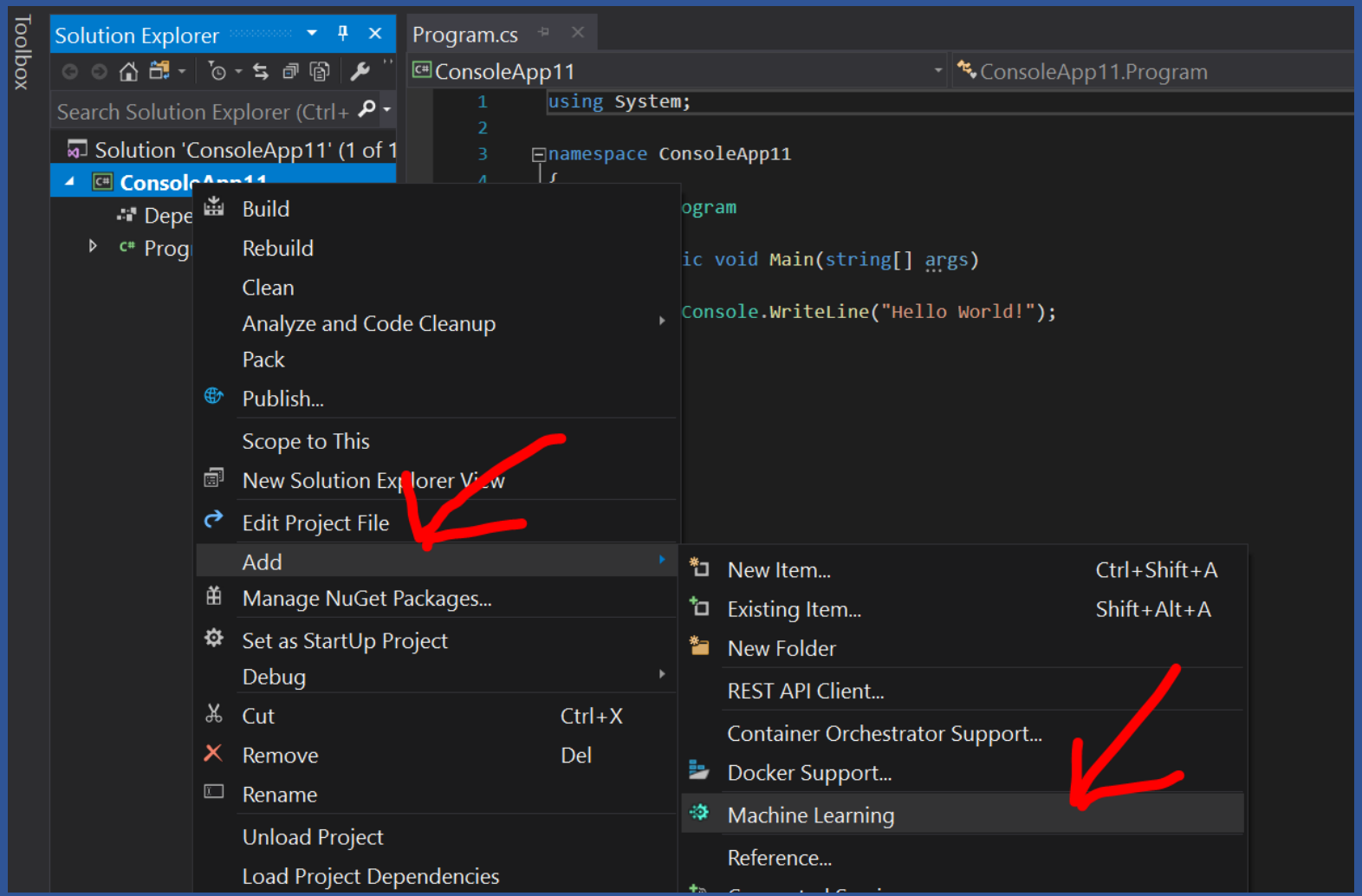
1. Install ML.NET Model Builder
2. Create new .NET CORE console project and add Machine Learning job
3. Pick a Scenario / Price Prediction
4. Set Data File
5. Set train time
6. Understand Train result
7. Understand evaluation result
8. Generate Code
9. Examine Code

Install ML.NET Model Builder

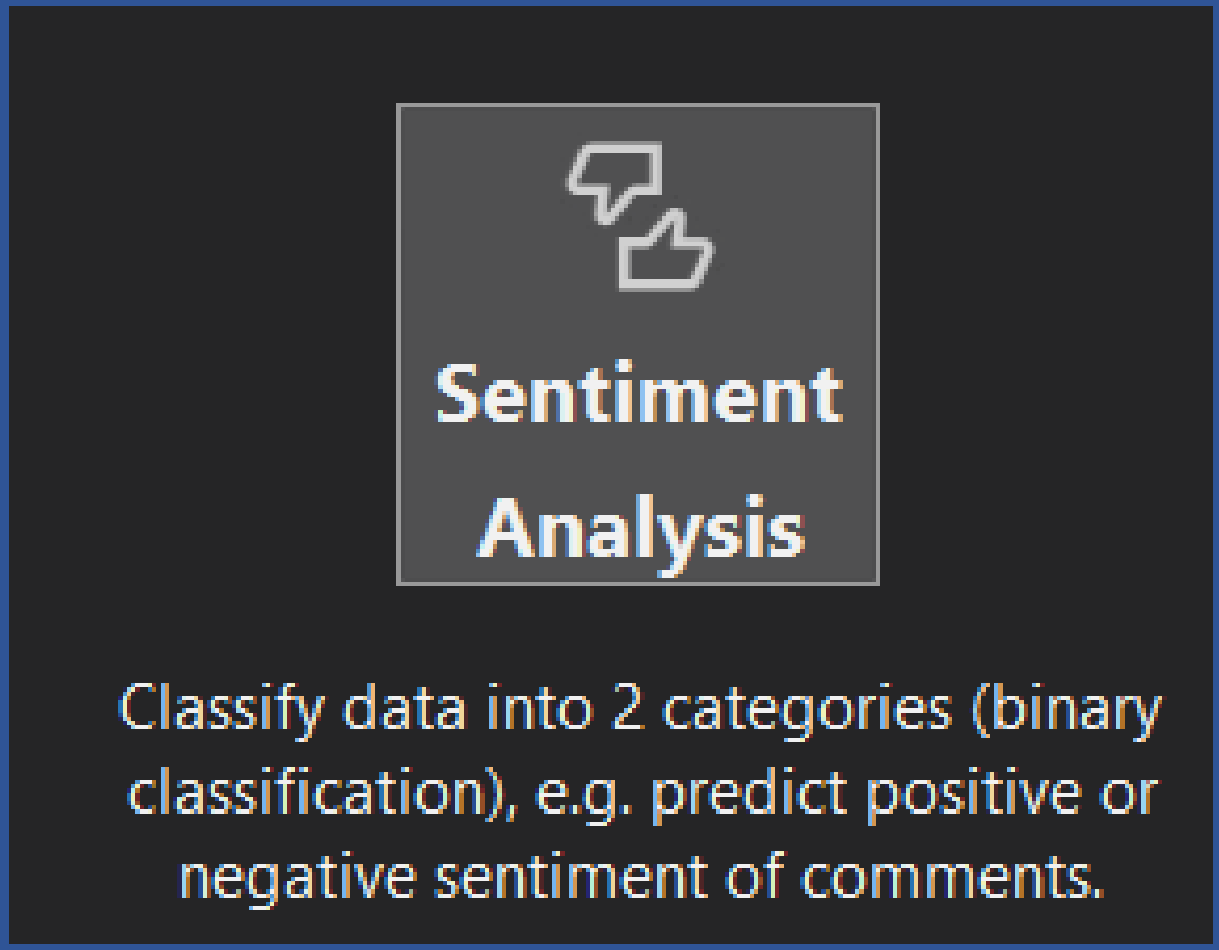
https://marketplace.visualstudio.com/items?itemName=MLNET.07



Create new .NET CORE console project and add Machine Learning

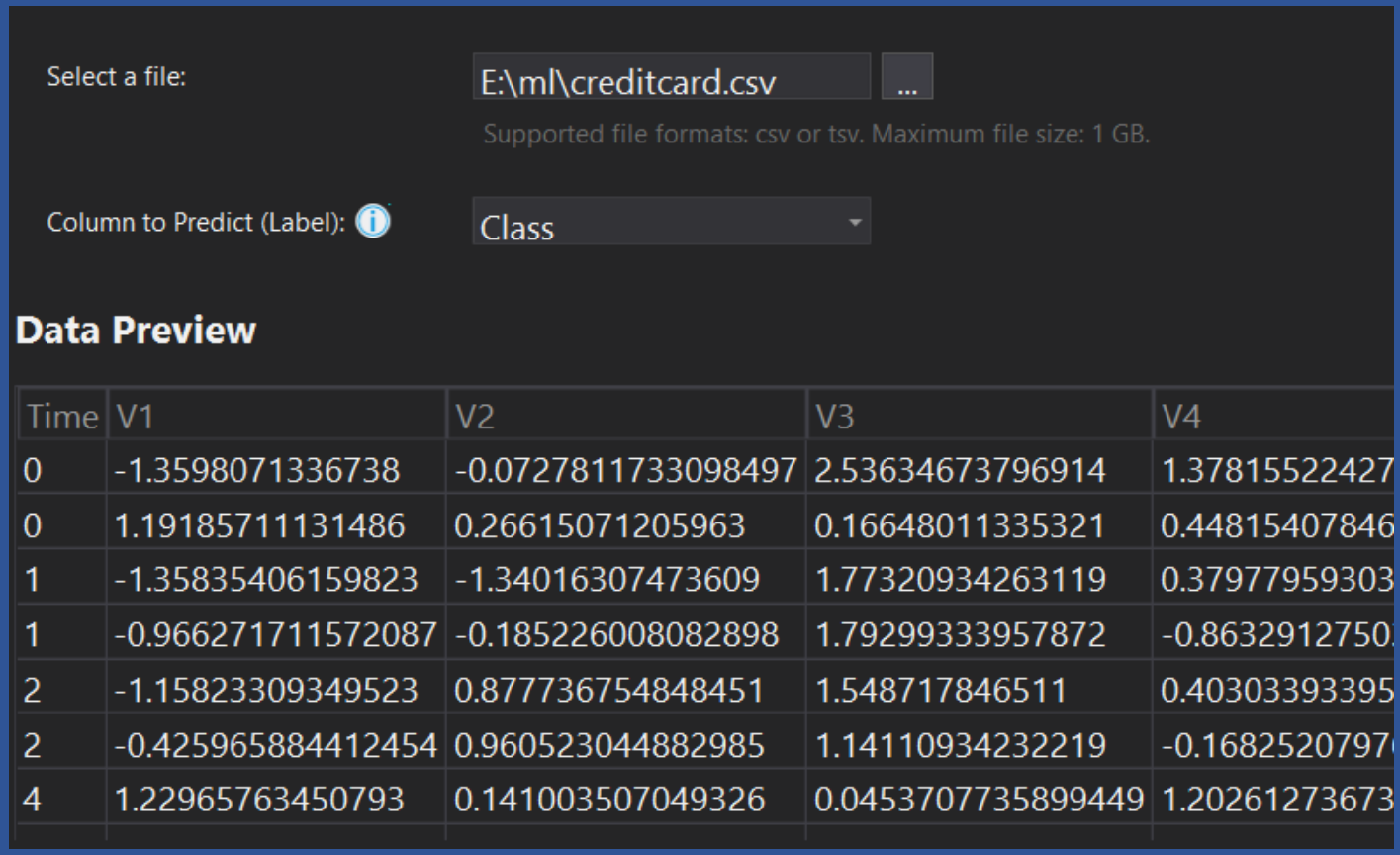


Pick a Scenario / Custom Scenario



Set Data File

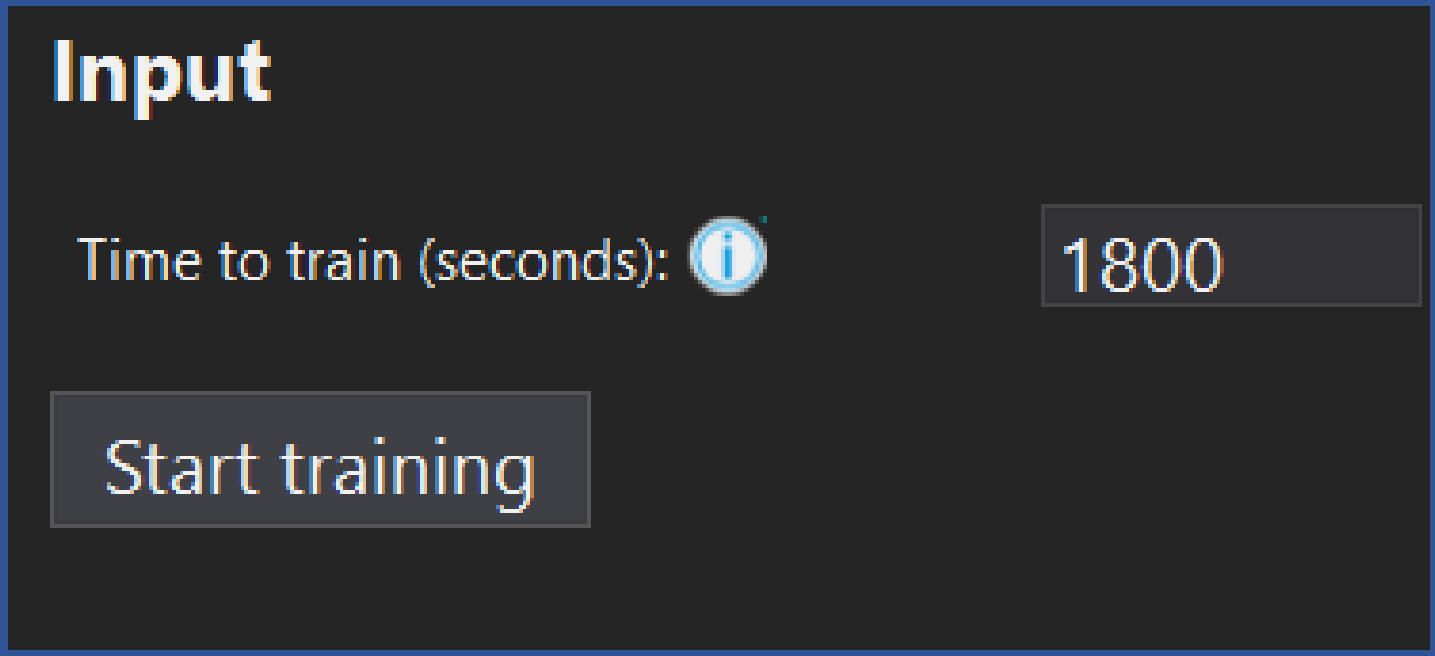
Data / File creditcardfraud.zip.csv
Label column name = class
class 0 = normal 1 = fraud



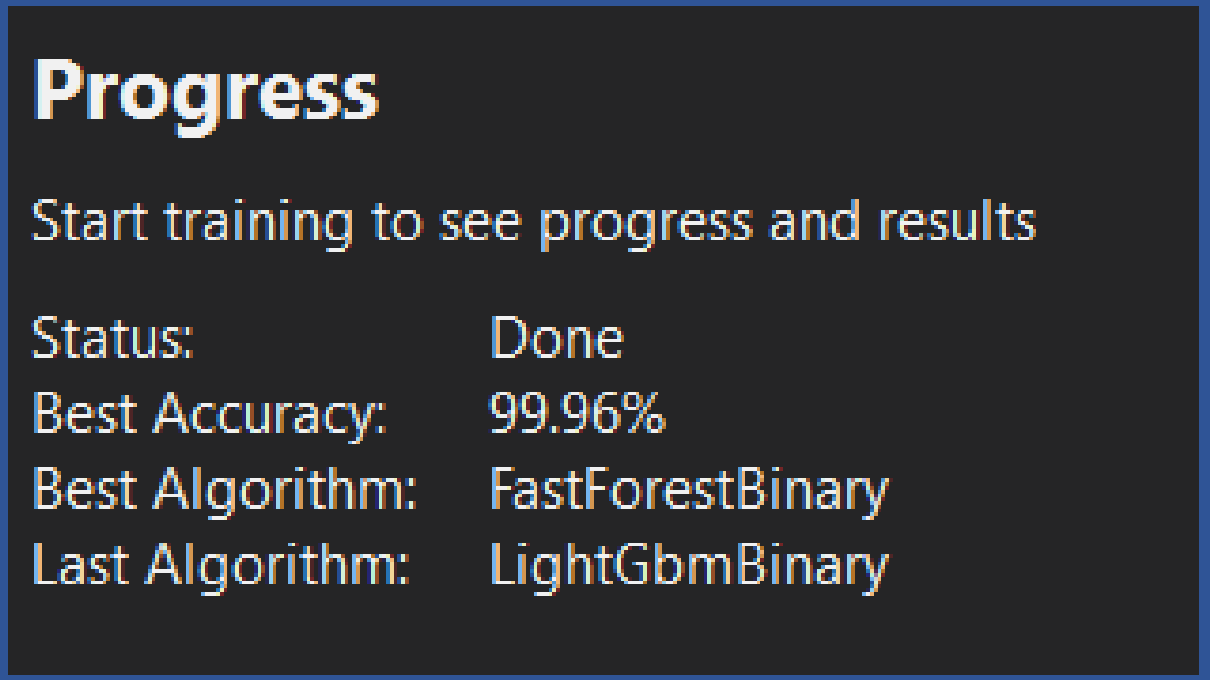
Time	V1	V2	V3	V4
0	-1.3598071336738	-0.0727811733098497	2.53634673796914	1.37815522427
0	1.19185711131486	0.26615071205963	0.16648011335321	0.44815407846
1	-1.35835406159823	-1.34016307473609	1.77320934263119	0.37977959303
1	-0.966271711572087	-0.185226008082898	1.79299333957872	-0.8632912750
2	-1.15823309349523	0.877736754848451	1.548717846511	0.40303393395
2	-0.425965884412454	0.960523044882985	1.14110934232219	-0.1682520797
4	1.22965763450793	0.141003507049326	0.0453707735899449	1.20261273673

Task = multiclass-classification

Time = 1,800 seconds



Understand the Train result



Understand evaluation result

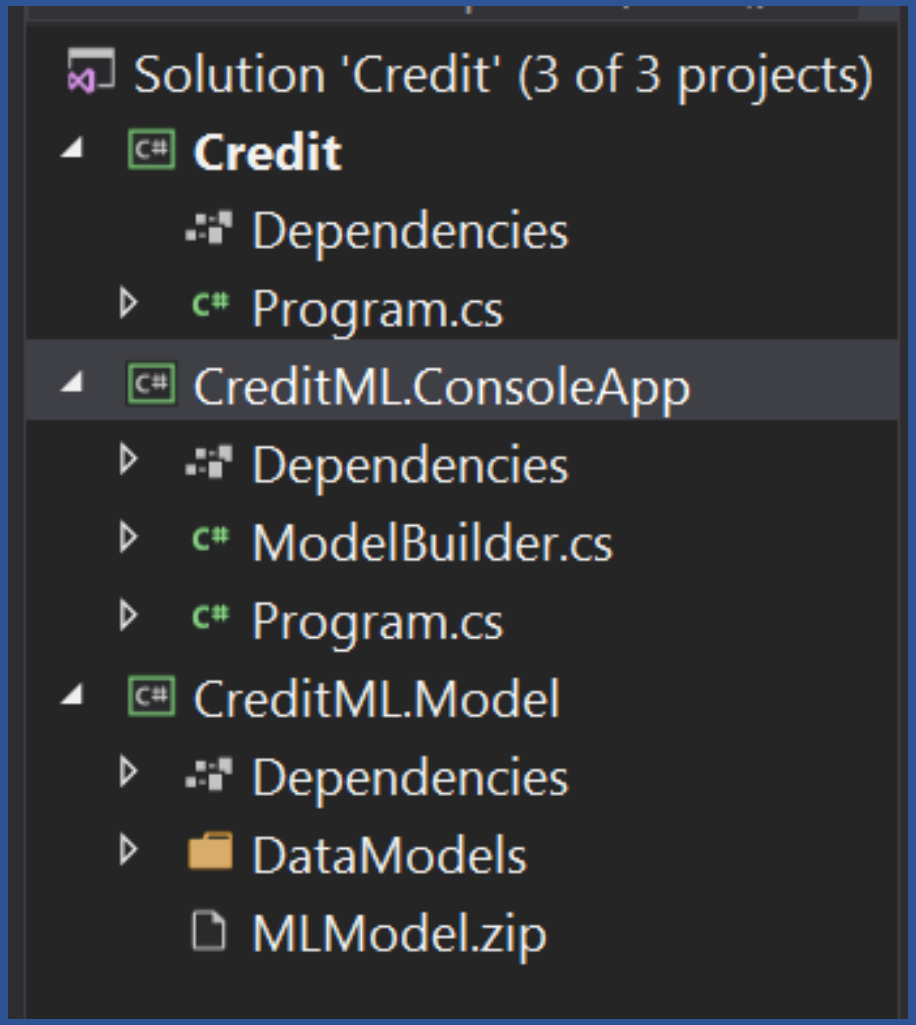
Output

ML Task:	binary-classification
Dataset:	creditcard.csv
Column to Predict (Label):	Class
Best Model:	FastForestBinary
Best Model Accuracy:	99.96%
Training Time:	1800.62 seconds
Models Explored (Total):	281

Top 5 models explored

Rank	Trainer	Accuracy	AUC	AUPRC	F1-score	Duration
1	FastForestBinary	0.9996	0.9693	0.8218	0.8537	4.9
2	FastForestBinary	0.9996	0.9952	0.8462	0.8537	20.8
3	FastForestBinary	0.9996	0.9910	0.8558	0.8750	7.2
4	LightGbmBinary	0.9996	0.9921	0.8098	0.8642	6.5
5	FastForestBinary	0.9996	0.9886	0.8599	0.8750	13.8

Examine Code



Next Step

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