(test1) C:\Users\user\Desktop>brainome -f NN -e5 -split 80 -o gene5s80.py train\_data.csv

Brainome Table Compiler v1.9-1158-prod

Copyright (c) 2019-2022 Brainome, Inc. All Rights Reserved.

Licensed to: Yu-Han Pang (Evaluation)

Expiration Date: 2022-07-31 79 days left

Maximum File Size: 30 GB

Maximum Instances: unlimited

Maximum Attributes: unlimited

Maximum Classes: unlimited

Connected to: daimensions.brainome.ai (local execution)

Command:

brainome -f NN -e5 -split 80 -o gene5s80.py train\_data.csv

Start Time: 05/13/2022, 17:13 UTC

Pre-training Measurements

Data:

Input: train\_data.csv

Target Column: 1.000000000000000000e+00

Number of instances: 5007

Number of attributes: 12288 out of 12288

Number of classes: 2

Class Balance:

1.000000000000000000e+00: 77.77%

0.000000000000000000e+00: 22.23%

Learnability:

Best guess accuracy: 77.77%

Data Sufficiency: Maybe enough data to generalize. [yellow]

Capacity Progression at [ 5%, 10%, 20%, 40%, 80%, 100% ]

8, 9, 10, 10, 11, 11

RF NN DT SVM

------ ------ ------ ------

Expected Training Accuracy: 100.00% ---- 100.00% ----

Expected Validation Accuracy: 93.77% ---- 66.65% ----

Recommendations:

Warning: Attribute count greater than number of instances. Collect more data to get better results.

Predictor:

Classifier Type: Neural Network

System Type: Binary classifier

Training / Validation Split: 80% : 20%

Accuracy:

Best-guess accuracy: 77.77%

Training accuracy: 99.32% (3978/4005 correct)

Validation Accuracy: 94.71% (949/1002 correct)

Combined Model Accuracy: 98.40% (4927/5007 correct)

Model Capacity (MEC): 24581 bits

Generalization Ratio: 0.12 bits/bit

Percent of Data Memorized: 1807.93%

Resilience to Noise: 0.80 dB

Training Confusion Matrix:

Actual | Predicted

------ | ---------

1.000000000000000000e+00 | 3094 21

0.000000000000000000e+00 | 6 884

Validation Confusion Matrix:

Actual | Predicted

------ | ---------

1.000000000000000000e+00 | 756 23

0.000000000000000000e+00 | 30 193

Training Accuracy by Class:

1.000000000000000000e+00 | TP FP TN FN TPR TNR PPV NPV F1 TS

------------------------ | ----- ----- ----- ----- -------- -------- -------- -------- -------- --------

1.000000000000000000e+00 | 3094 6 884 21 99.33% 99.33% 99.81% 97.68% 99.57% 99.13%

0.000000000000000000e+00 | 884 21 3094 6 99.33% 99.33% 97.68% 99.81% 98.50% 97.04%

Validation Accuracy by Class:

1.000000000000000000e+00 | TP FP TN FN TPR TNR PPV NPV F1 TS

------------------------ | ----- ----- ----- ----- -------- -------- -------- -------- -------- --------

1.000000000000000000e+00 | 756 30 193 23 97.05% 86.55% 96.18% 89.35% 96.61% 93.45%

0.000000000000000000e+00 | 193 23 756 30 86.55% 97.05% 89.35% 96.18% 87.93% 78.46%

Messages:

Writing NN predictor file gene5s80.py

End Time: 05/13/2022, 18:25 UTC

Runtime Duration: 1h 11m 50s