

Dataset Preview:

	variance	skewness	curtosis	entropy	class
0	3.62160	8.6661	-2.80730	-0.44699	0
1	4.54590	8.1674	-2.45860	-1.46210	0
2	3.86600	-2.6383	1.92420	0.10645	0
3	3.45660	9.5228	-4.01120	-3.59440	0
4	0.32924	-4.4552	4.57180	-0.98880	0
5	4.36840	9.6718	-3.96060	-3.16250	0
6	3.59120	3.0129	0.72888	0.56421	0
7	2.09220	-6.8100	8.46360	-0.60216	0
8	3.20320	5.7588	-0.75345	-0.61251	0
9	1.53560	9.1772	-2.27180	-0.73535	0

0s [3] print("\nDataset Dimensions:", data.shape)

Dataset Dimensions: (1372, 5)

0s [4] print("\nDescriptive Statistics:\n", data.describe())

Descriptive Statistics:

	variance	skewness	curtosis	entropy	class
count	1372.000000	1372.000000	1372.000000	1372.000000	1372.000000
mean	0.433735	1.922353	1.397627	-1.191657	0.444606
std	2.842763	5.869047	4.310030	2.101013	0.497103
min	-7.042100	-13.773100	-5.286100	-8.548200	0.000000
25%	-1.773000	-1.708200	-1.574975	-2.413450	0.000000
50%	0.496180	2.319650	0.616630	-0.586650	0.000000
75%	2.821475	6.814625	3.179250	0.394810	1.000000
max	6.824800	12.951600	17.927400	2.449500	1.000000

MLPClassifier with activation='relu':

Confusion Matrix:

```
[[148  0]
 [  0 127]]
```

Classification Report:

	precision	recall	f1-score	support
0	1.00	1.00	1.00	148
1	1.00	1.00	1.00	127
accuracy			1.00	275
macro avg	1.00	1.00	1.00	275
weighted avg	1.00	1.00	1.00	275

MLPClassifier with activation='logistic':

Confusion Matrix:

```
[[148  0]
 [  1 126]]
```

Classification Report:

	precision	recall	f1-score	support
0	0.99	1.00	1.00	148
1	1.00	0.99	1.00	127
accuracy			1.00	275
macro avg	1.00	1.00	1.00	275
weighted avg	1.00	1.00	1.00	275

MLPClassifier with activation='tanh':

Confusion Matrix:

```
[[148  0]
 [  0 127]]
```

Classification Report:

	precision	recall	f1-score	support
0	1.00	1.00	1.00	148
1	1.00	1.00	1.00	127
accuracy			1.00	275
macro avg	1.00	1.00	1.00	275
weighted avg	1.00	1.00	1.00	275

MLPClassifier with activation='identity':

Confusion Matrix:

```
[[146  2]
 [  2 125]]
```

Classification Report:

	precision	recall	f1-score	support
0	0.99	0.99	0.99	148
1	0.98	0.98	0.98	127
accuracy			0.99	275
macro avg	0.99	0.99	0.99	275
weighted avg	0.99	0.99	0.99	275

Training with test_size=0.3...



MLPClassifier with activation='relu':

Confusion Matrix:

```
[[229  0]
 [  0 183]]
```

Classification Report:

	precision	recall	f1-score	support
0	1.00	1.00	1.00	229
1	1.00	1.00	1.00	183
accuracy			1.00	412
macro avg	1.00	1.00	1.00	412
weighted avg	1.00	1.00	1.00	412

MLPClassifier with activation='logistic':

Confusion Matrix:

```
[[229  0]
 [  1 182]]
```

Classification Report:

	precision	recall	f1-score	support
0	1.00	1.00	1.00	229
1	1.00	0.99	1.00	183
accuracy			1.00	412
macro avg	1.00	1.00	1.00	412
weighted avg	1.00	1.00	1.00	412

MLPClassifier with activation='tanh':

Confusion Matrix:

```
[[229  0]
 [  0 183]]
```

Classification Report:

	precision	recall	f1-score	support
0	1.00	1.00	1.00	229
1	1.00	1.00	1.00	183
accuracy			1.00	412
macro avg	1.00	1.00	1.00	412
weighted avg	1.00	1.00	1.00	412

MLPClassifier with activation='identity':

Confusion Matrix:

```
[[226  3]
 [  2 181]]
```

Classification Report:

	precision	recall	f1-score	support
0	0.99	0.99	0.99	229
1	0.98	0.99	0.99	183
accuracy			0.99	412
macro avg	0.99	0.99	0.99	412
weighted avg	0.99	0.99	0.99	412