RESULTS OF THE NEURAL NETWORK MODEL

Neural NetworkModel Results:

```
'nn_model results'
'The accuracy is:'
0.956140350877193
'The Precision is:'
0.9787234042553191
'The Recall is:'
0.92
'The F1 Score is:'
0.9484536082474226
'The Sensitivity is:'
0.92
'The Specificity is:'
0.984375
```

Accuracy (0.9561) – The overall correctness of the model, calculated as (TP + TN) / (TP + TN + FP + FN), meaning 95.61% of predictions were correct.

Precision (0.9787) – The proportion of correctly predicted positive cases among all predicted positives, indicating 97.87% of predicted positives were true.

Recall/Sensitivity (0.92) – The proportion of actual positive cases correctly identified, meaning the model detected 92% of all true positives.

F1 Score (0.9485) – The harmonic mean of precision and recall, balancing false positives and false negatives, with a score of 94.85%.

Specificity (0.9844) – The proportion of actual negative cases correctly identified, meaning 98.44% of true negatives were correctly classified.