Model Performance Metrics

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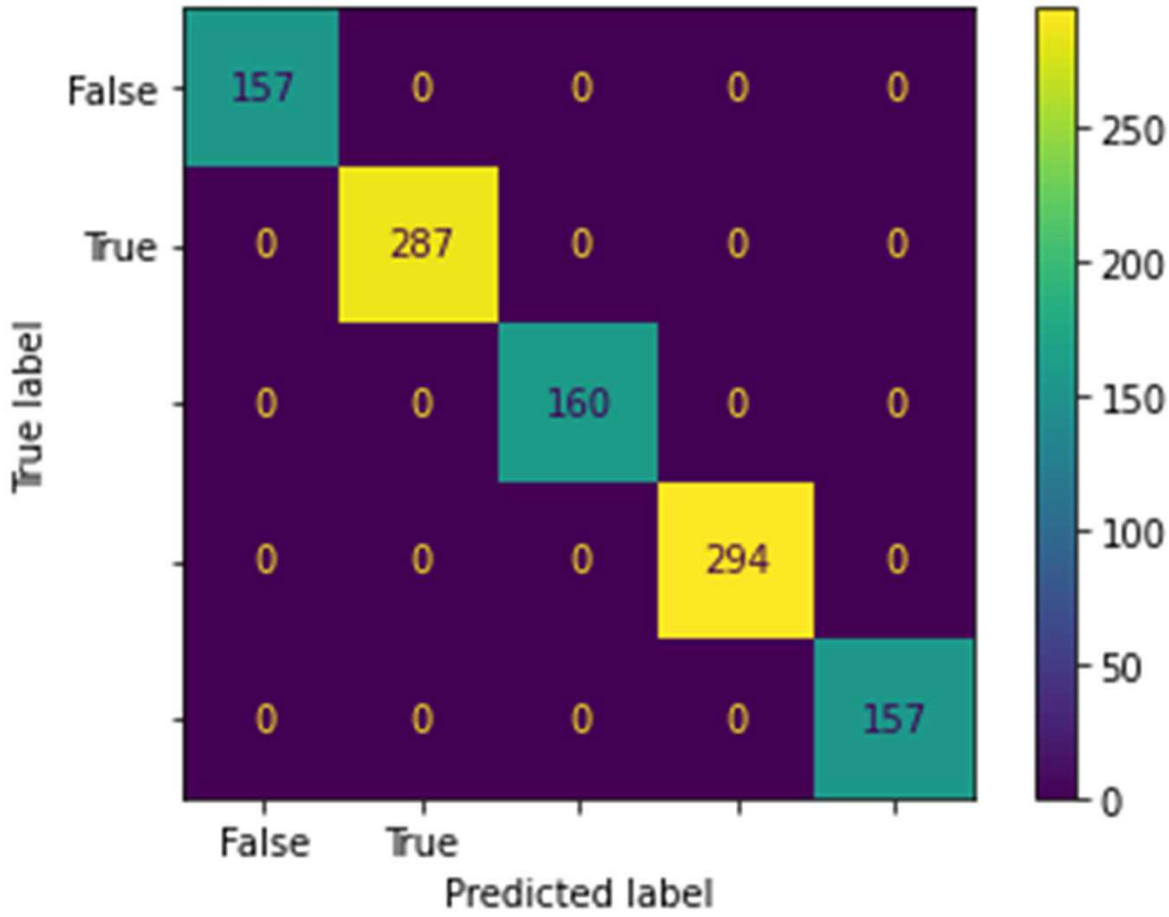
Project Name	AI-Powered Nutrition Analyzer For Fitness Euthusiasts

1. Confusion Matrix



```
print(metrics.classification_report(test_data['label'].values, test_data['model_preds'].values))
```

```
              precision    recall  f1-score   support

           0       1.00      1.00      1.00       157
           1       1.00      1.00      1.00       287
           2       1.00      1.00      1.00       160
           3       1.00      1.00      1.00       294
           4       1.00      1.00      1.00       157

    accuracy                           1.00      1055
   macro avg       1.00      1.00      1.00      1055
weighted avg       1.00      1.00      1.00      1055
```

2. Accuracy – 100 %

```
[8] print(f"the accuracy is {metrics.accuracy_score(test_data['label'].values, test_data['model_preds'].values)}")
```

```
the accuracy is 1.0
```

3. Precision – 100 %

```
[11] print(f"the precision is {metrics.precision_score(test_data['label'].values, test_data['model_preds'].values, average = 'weighted')}")
```

```
the precision is 1.0
```

4. Recall – 100 %

```
[12] print(f"the recall is {metrics.recall_score(test_data['label'].values, test_data['model_preds'].values, average = 'weighted')}")
```

```
the recall is 1.0
```

5. Specificity – 100 %

```
print(f"the specificity is {metrics.recall_score(test_data['label'].values, test_data['model_preds'].values, pos_label=0,average = 'weighted')}")
```

```
the specificity is 1.0
```

6. F1-Score – 100 %

```
[13] print(f"the f1 score is {metrics.f1_score(test_data['label'].values, test_data['model_preds'].values,average = 'weighted')}")
```

```
the f1 score is 1.0
```