Capstone Two Model Metrics File

Model 1: Logistic Regression

GridSearchCV found best parameters to be: {'C': 1}

Performance Metrics:
Accuracy: 0.8048218673218673

```
              precision    recall  f1-score   support

      <=50K       0.81      0.97      0.88      4990
       >50K       0.73      0.26      0.39      1522

   accuracy                           0.80      6512
  macro avg       0.77      0.62      0.64      6512
weighted avg       0.79      0.80      0.77      6512
```

Model 2: Decision Tree Classifier

GridSearchCV found best parameters to be: {'criterion': 'entropy', 'max_depth': 10, 'splitter': 'best'}

Performance Metrics:
Accuracy: 0.8562653562653563

```
              precision    recall  f1-score   support

      <=50K       0.88      0.95      0.91      4990
       >50K       0.76      0.56      0.64      1522

   accuracy                           0.86      6512
  macro avg       0.82      0.75      0.78      6512
weighted avg       0.85      0.86      0.85      6512
```

Model 3: Random Forest Classifier

GridSearchCV found best parameters to be: {'criterion': 'gini', 'max_depth': 10, 'n_estimators': 100}

Performance Metrics:
Accuracy: 0.8585687960687961

```
              precision    recall  f1-score   support

       <=50K       0.87      0.96      0.91      4990
        >50K       0.79      0.54      0.64      1522

    accuracy                           0.86      6512
   macro avg       0.83      0.75      0.78      6512
weighted avg       0.85      0.86      0.85      6512
```

Model 4: Gradient Boosting Classifier

GridSearchCV found best parameters to be: {'learning_rate': 0.1, 'n_estimators': 100}

Performance Metrics:
Accuracy: 0.8645577395577395

```
              precision    recall  f1-score   support

       <=50K       0.88      0.95      0.91      4990
        >50K       0.78      0.59      0.67      1522

    accuracy                           0.86      6512
   macro avg       0.83      0.77      0.79      6512
weighted avg       0.86      0.86      0.86      6512
```