Model Performance Report

```
Logistic Regression:
              precision    recall  f1-score   support

       False       0.41      0.32      0.36        75
        True       0.54      0.64      0.59        95

    accuracy                           0.50       170
   macro avg       0.48      0.48      0.48       170
weighted avg       0.49      0.50      0.49       170
```

```
Random Forest:
              precision    recall  f1-score   support

       False       0.43      0.37      0.40        75
        True       0.55      0.61      0.58        95

    accuracy                           0.51       170
   macro avg       0.49      0.49      0.49       170
weighted avg       0.50      0.51      0.50       170
```

```
SVC:
              precision    recall  f1-score   support

       False       0.00      0.00      0.00        75
        True       0.56      1.00      0.72        95

    accuracy                           0.56       170
   macro avg       0.28      0.50      0.36       170
weighted avg       0.31      0.56      0.40       170
```
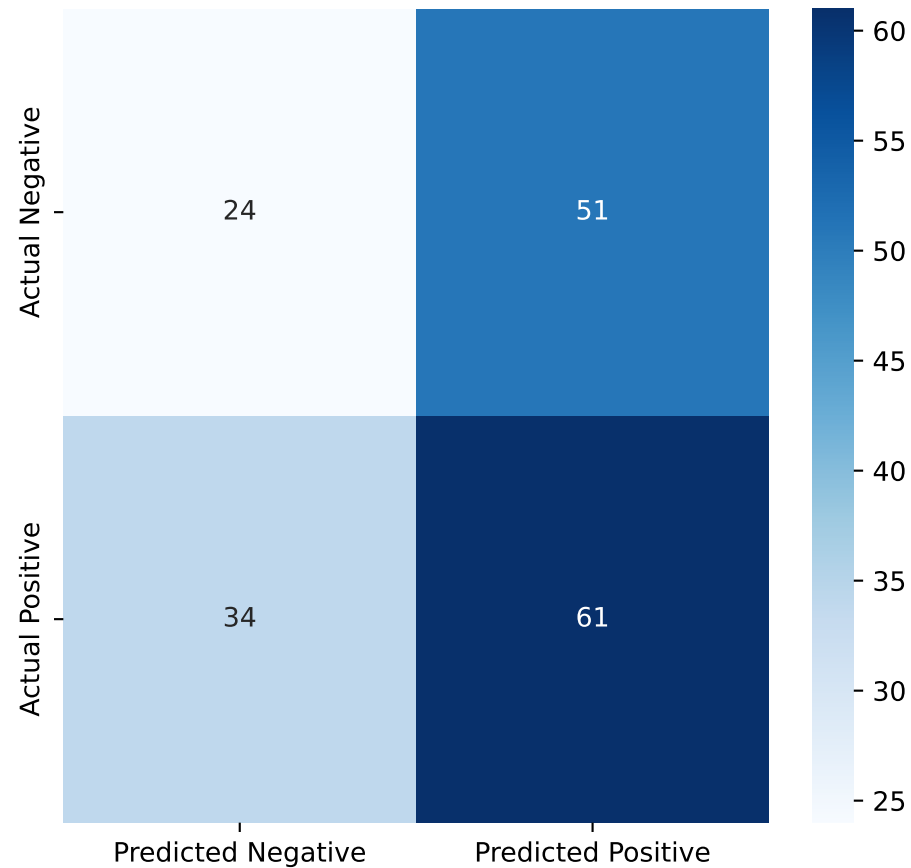
Best Hyperparameters for Each Model

```
Logistic Regression Best Params:
   logisticregression__C: 1
```

```
Random Forest Best Params:
   randomforestclassifier__max_depth: 5
   randomforestclassifier__n_estimators: 5
```
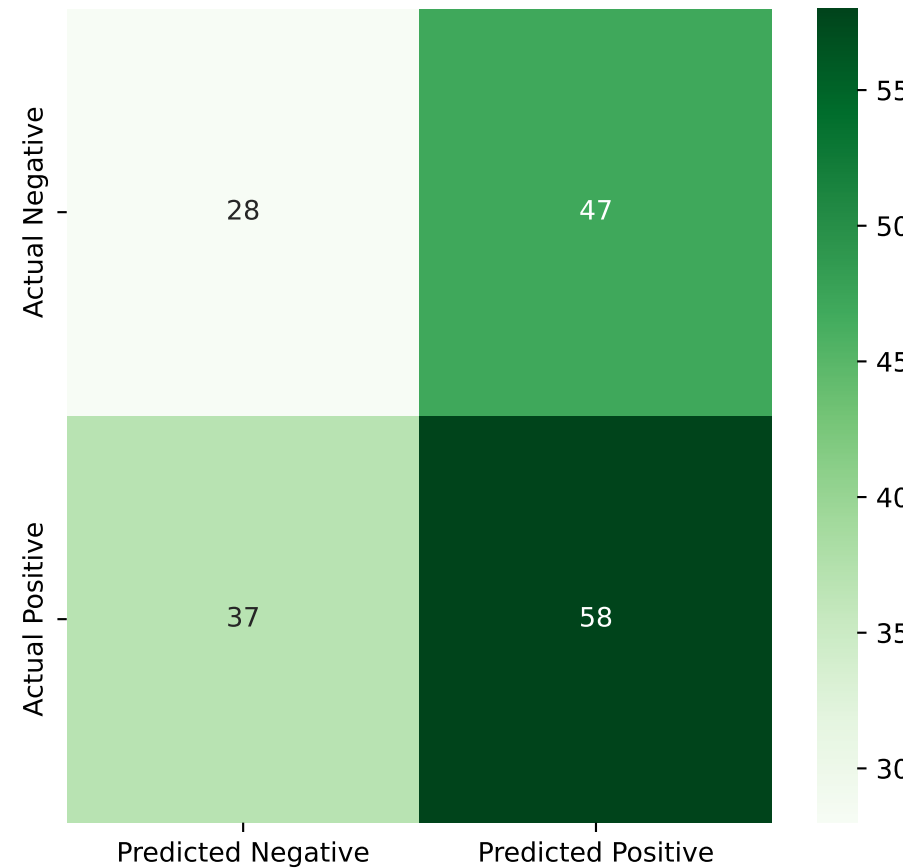
```
SVC Best Params:
   svc__C: 0.1
```

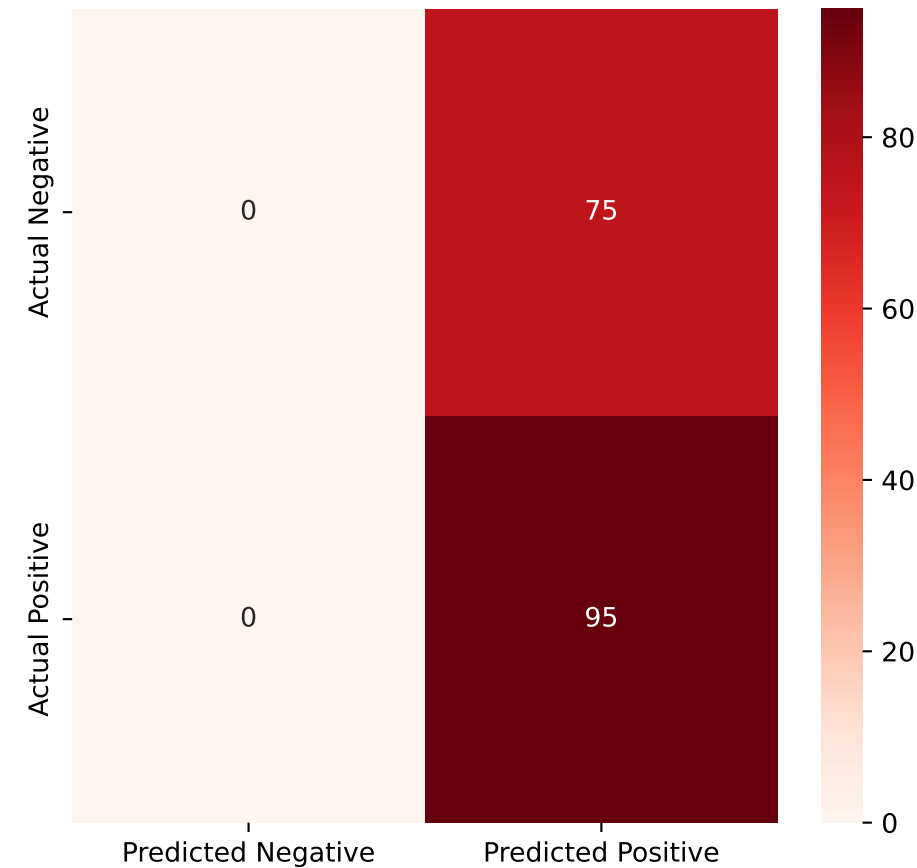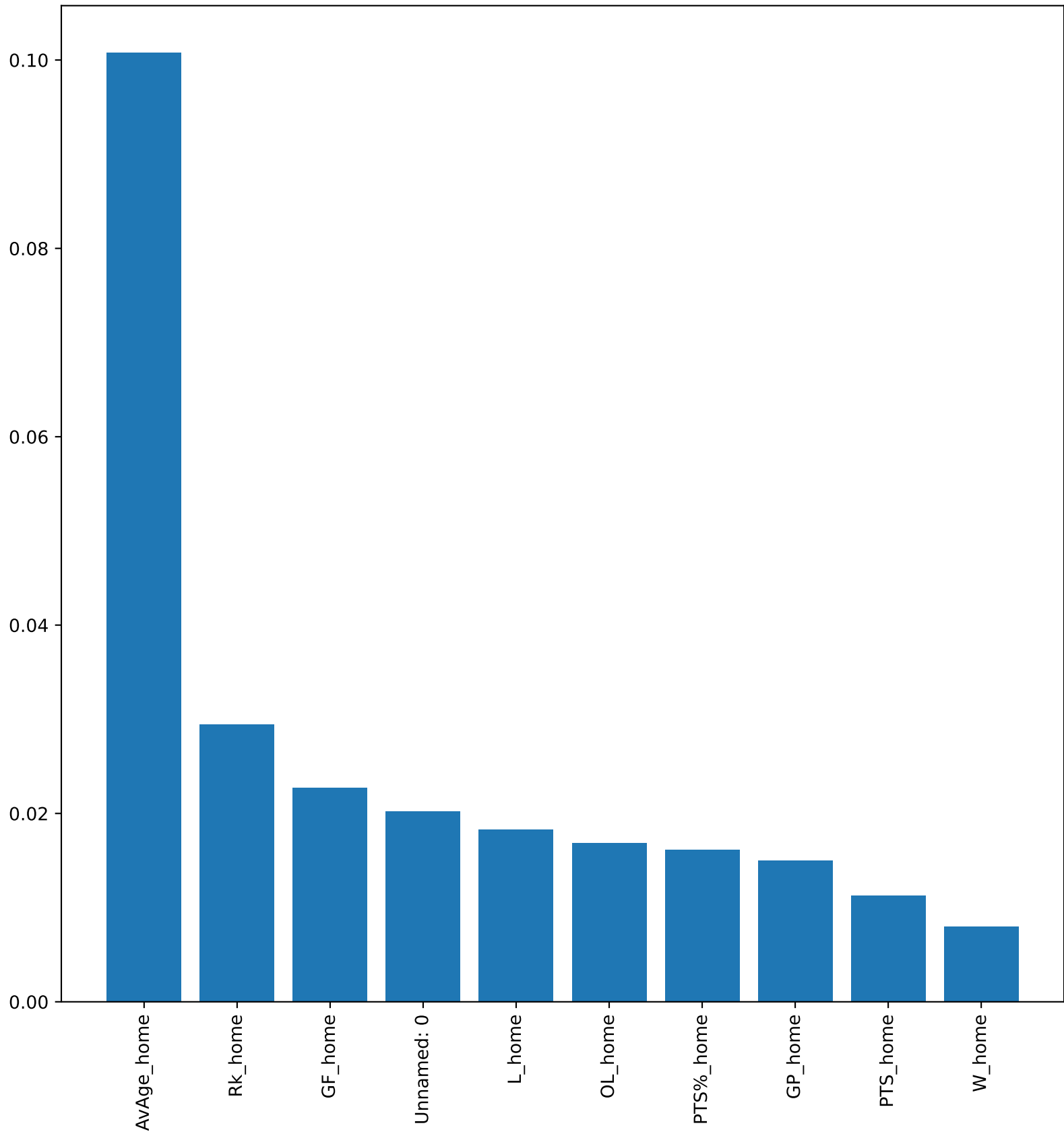|	Training Accuracy	Validation Accuracy	Test Accuracy
Logistic Regression	0.5588145970113183	0.5334190506803814	0.5
Random Forest	0.9182494864462077	0.5045837351333976	0.5058823529411764
SVC	0.5830606463393349	0.5190121075752705	0.5588235294117647

Confusion Matrix - Logistic Regression

	Predicted Negative	Predicted Positive
Actual Negative	24	51
Actual Positive	34	61

Confusion Matrix - Random Forest

	Predicted Negative	Predicted Positive
Actual Negative	28	47
Actual Positive	37	58

Confusion Matrix - SVC

	Predicted Negative	Predicted Positive
Actual Negative	0	75
Actual Positive	0	95

Feature Importance - Logistic Regression

Feature Importance - Random Forest