

Model Performance Report

Logistic Regression:

	precision	recall	f1-score	support
False	0.41	0.29	0.34	75
True	0.54	0.66	0.60	95
accuracy			0.50	170
macro avg	0.48	0.48	0.47	170
weighted avg	0.48	0.50	0.48	170

Random Forest:

	precision	recall	f1-score	support
False	0.40	0.31	0.35	75
True	0.54	0.64	0.59	95
accuracy			0.49	170
macro avg	0.47	0.47	0.47	170
weighted avg	0.48	0.49	0.48	170

SVC:

	precision	recall	f1-score	support
False	0.45	0.25	0.32	75
True	0.56	0.76	0.65	95
accuracy			0.54	170
macro avg	0.51	0.51	0.49	170
weighted avg	0.51	0.54	0.50	170

Best Hyperparameters for Each Model

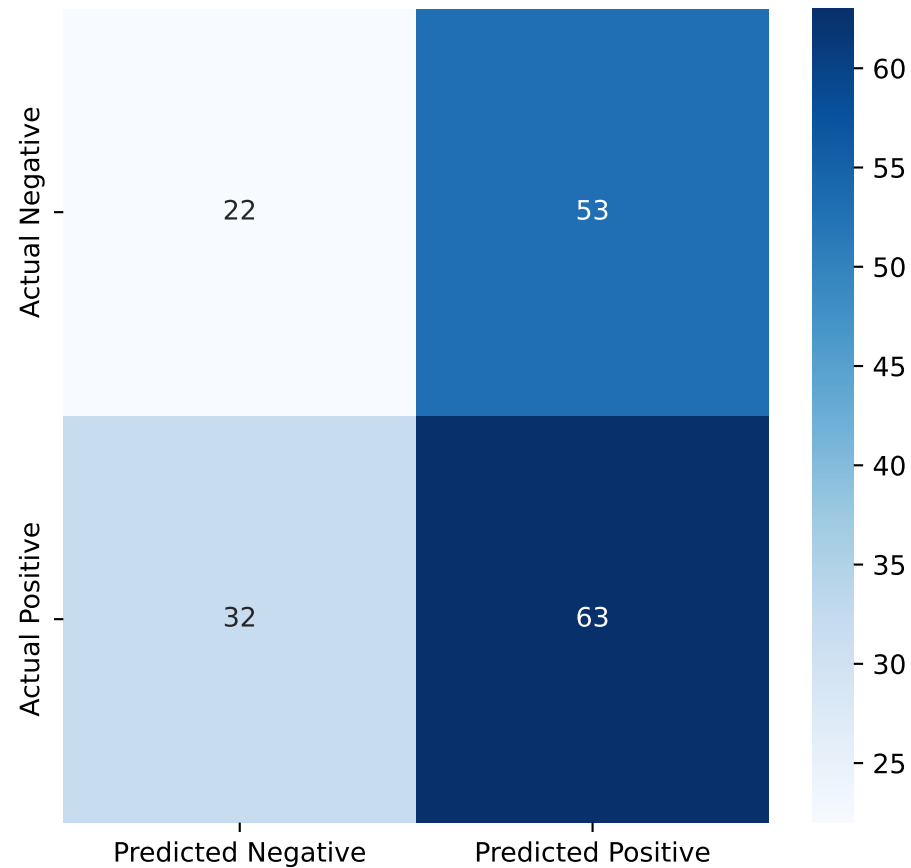
Logistic Regression Best Params:
 logisticregression__C: 0.01

Random Forest Best Params:
 randomforestclassifier__max_depth: 5
 randomforestclassifier__n_estimators: 5

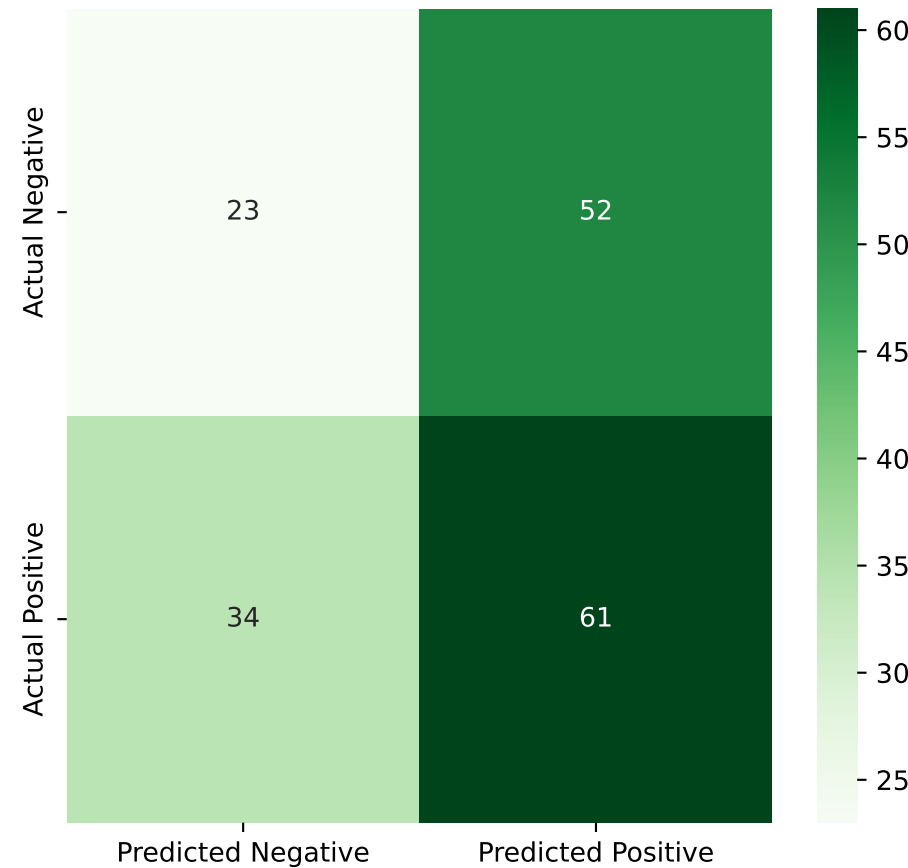
SVC Best Params:
 calibratedclassifiercv__estimator__C: 0.1
 calibratedclassifiercv__estimator__kernel: rbf

	Training Accuracy	Validation Accuracy	Test Accuracy
Logistic Regression	0.5596335978303192	0.5347283831565413	0.5
Random Forest	0.7778505927686256	0.5032722597235615	0.49411764705882355
SVC	0.5584828345484083	0.5294867673845494	0.5352941176470588

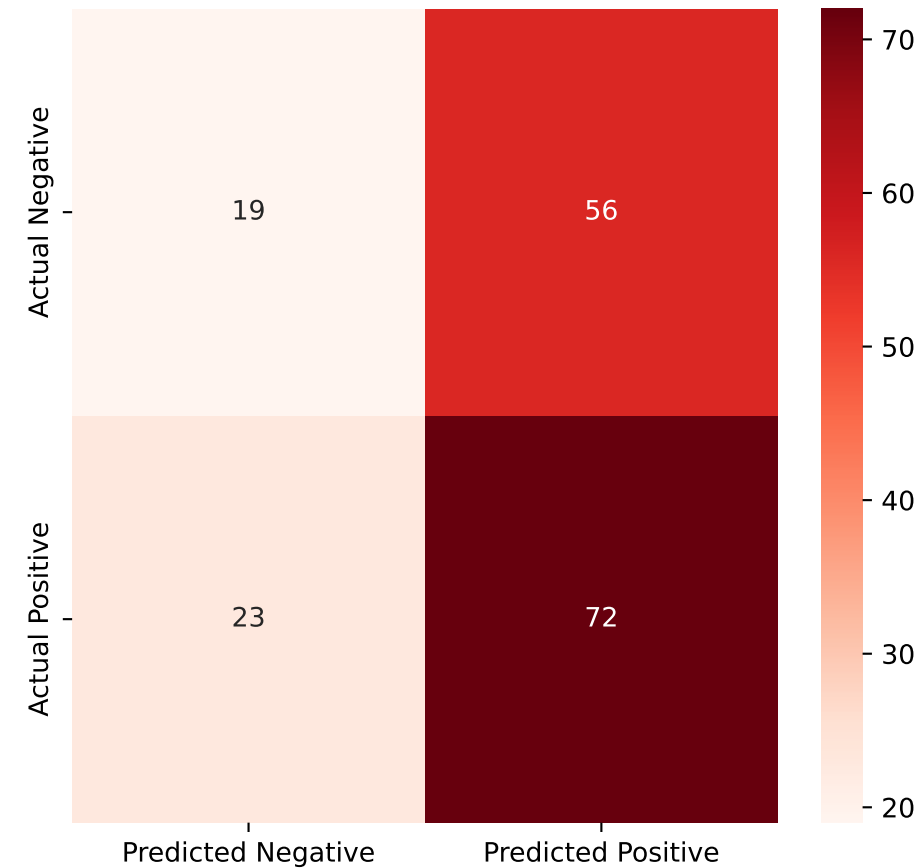
Confusion Matrix - Logistic Regression



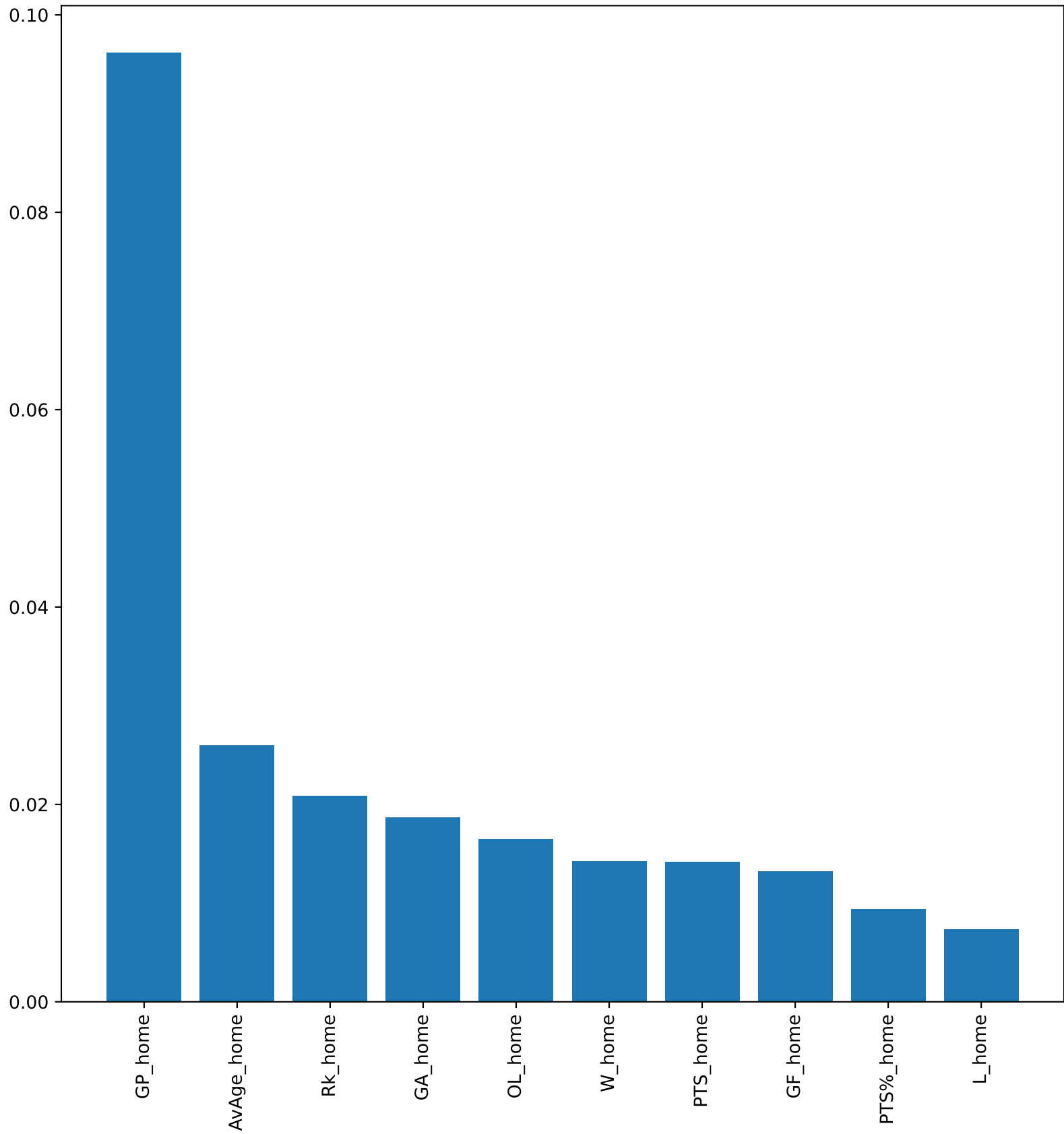
Confusion Matrix - Random Forest



Confusion Matrix - SVC



Feature Importance - Logistic Regression



Feature Importance - Random Forest

