

Classification Report				
	precision	recall	f1-score	support
0	0.67	0.81	0.73	59
1	0.35	0.20	0.26	30
accuracy			0.61	89
macro avg	0.51	0.51	0.49	89
weighted avg	0.56	0.61	0.57	89

Accuracy  
Accuracy: 0.6067415730337079

# Optimal Win Ranges Summary for Long Trades

	feature	trade_type	optimal_win_range_start	optimal_win_range_end
0	LIN_REG_INTERCEPT_binary	LE	-1.043850	-0.869515
1	LIN_REG_INTERCEPT_binary	LE	0.591288	0.957992
2	VWAP_CLOUD_LOW_binary	LE	-2.022858	-1.687734
3	VWAP_CLOUD_LOW_binary	LE	0.038279	0.494350
4	VWAP_CLOUD_HIGH_binary	LE	-0.425833	-0.231446
5	VWAP_CLOUD_HIGH_binary	LE	1.504148	2.348341
6	BOLLI_500_LOWER_binary	LE	-1.502449	-1.127005
7	BOLLI_500_LOWER_binary	LE	0.196817	0.665580
8	1000_SMA_binary	LE	-0.426201	0.993251
9	VWAP_L1_binary	LE	-1.448414	-0.949569
10	VWAP_L1_binary	LE	0.544825	0.690411
11	BOLLI_500_MID_binary	LE	-1.072607	-0.761534
12	VWAP_L2_binary	LE	-2.742122	-1.078318
13	CP__S5_binary	LE	-3.414256	-3.135942
14	CP__S5_binary	LE	-0.215498	0.292890

# Optimal Win Ranges Summary for Short Trades

	feature	trade_type	optimal_win_range_start	optimal_win_range_end
0	LIN_REG_INTERCEPT_binary	SE	0.104354	0.957992
1	VWAP_CLOUD_LOW_binary	SE	-2.022858	-1.549149
2	VWAP_CLOUD_LOW_binary	SE	0.171825	0.494350
3	VWAP_CLOUD_HIGH_binary	SE	-0.425833	-0.089822
4	VWAP_CLOUD_HIGH_binary	SE	1.640219	2.348341
5	1000_SMA_binary	SE	-1.006795	-0.838623
6	1000_SMA_binary	SE	0.630880	0.993251
7	VWAP_L1_binary	SE	-1.448414	0.566235
8	BOLLI_500_MID_binary	SE	-1.072607	0.605180
9	VWAP_L2_binary	SE	-2.742122	0.361571
10	BOLLI_500_UPPER_binary	SE	-0.762983	-0.561640
11	BOLLI_500_UPPER_binary	SE	0.893429	1.310645
12	CP__S5_binary	SE	0.014575	0.292890

# Optimal Win Ranges Summary for Both Long and Short Trades

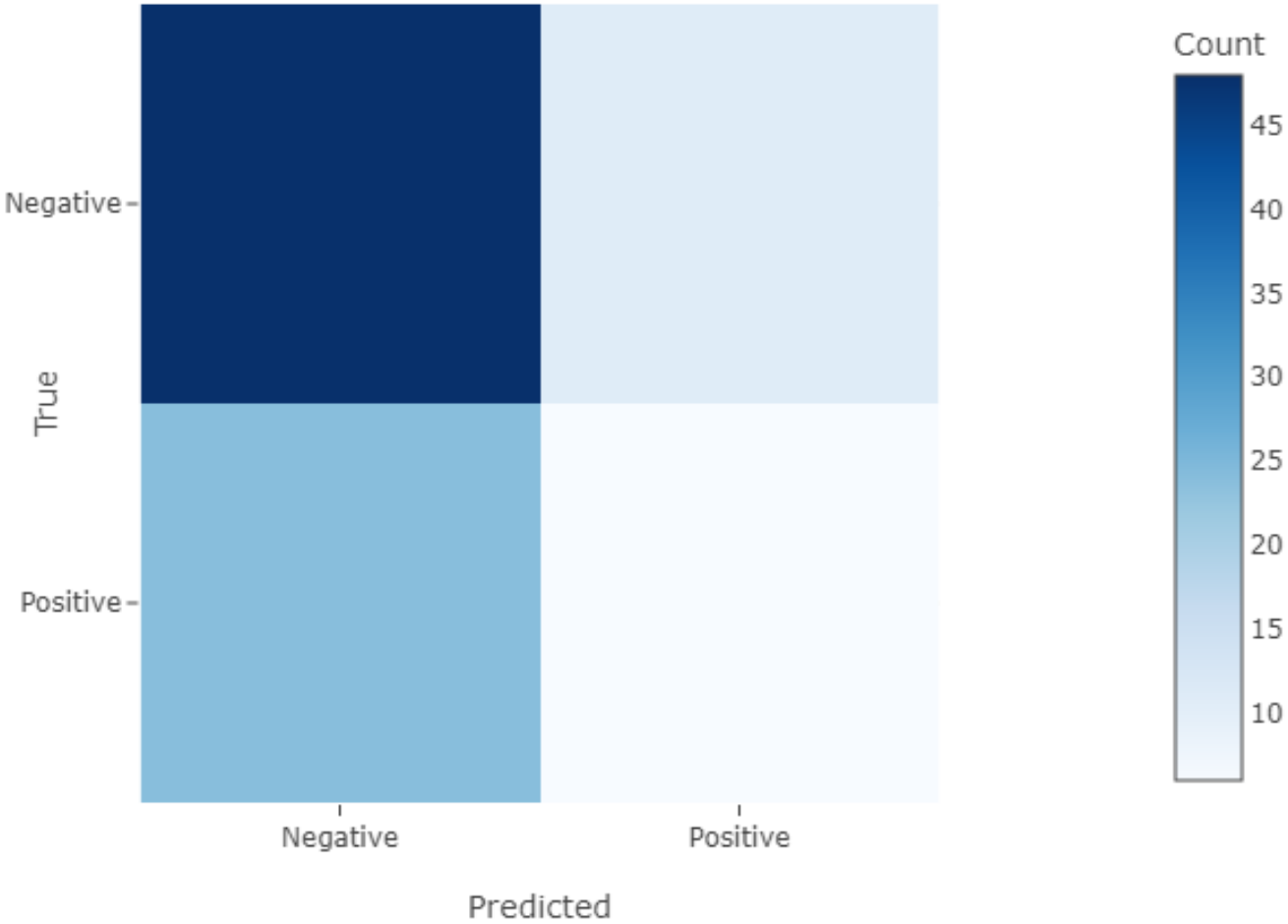
	feature	trade_type	optimal_win_range_start	optimal_win_range_end
0	LIN_REG_INTERCEPT	binary	-1.043850	-0.807396
1	LIN_REG_INTERCEPT	binary	0.541192	0.957992
2	VWAP_CLOUD_LOW	binary	-2.022858	-1.710412
3	VWAP_CLOUD_LOW	binary	0.146628	0.494350
4	VWAP_CLOUD_HIGH	binary	-0.425833	-0.264769
5	VWAP_CLOUD_HIGH	binary	1.562464	2.348341
6	BOLLI_500_LOWER	binary	-1.502449	-1.341854
7	BOLLI_500_LOWER	binary	0.266263	0.665580
8	1000_SMA	binary	0.462708	0.993251
9	VWAP_L1	binary	-1.448414	-1.108000
10	VWAP_L1	binary	0.347856	0.690411
11	BOLLI_500_MID	binary	-1.072607	-0.735444
12	BOLLI_500_MID	binary	0.587118	0.932308
13	VWAP_L2	binary	-2.742122	-1.252473
14	BOLLI_500_UPPER	binary	-0.762983	-0.704863
15	BOLLI_500_UPPER	binary	0.750205	1.310645
16	CP__S5	binary	-0.067063	0.292890

Loss Mitigation Analysis									
	count	mean	std	min	25%	50%	75%	max	
1000_SMA_binary		161.0	-0.099942	9.987799e-01	-1.006795	-1.006795	-1.006795	0.993251	0.993251
144_SMA_binary		161.0	-0.060427	1.003068e+00	-1.029789	-1.029789	-1.029789	0.971073	0.971073
14_P_MA_ENVELOPES_LOWER_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
14_P_MA_ENVELOPES_MID_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
14_P_MA_ENVELOPES_UPPER_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
236_EMA_binary		161.0	-0.046863	1.002761e+00	-1.015928	-1.015928	-1.015928	0.984322	0.984322
382_EMA_binary		161.0	-0.054839	1.004969e+00	-1.062924	-1.062924	0.940801	0.940801	0.940801
618_EMA_binary		161.0	-0.046930	1.005102e+00	-1.067753	-1.067753	0.936546	0.936546	0.936546
62_ZLEMA_binary		161.0	0.051383	1.002843e+00	-0.979886	-0.979886	1.020527	1.020527	1.020527
8_ZLEMA_binary		161.0	0.060427	1.003068e+00	-0.971073	-0.971073	1.029789	1.029789	1.029789
ACCUM_DIST_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
APZ_LOW_binary		161.0	0.006838	9.609567e-01	-12.110601	0.082572	0.082572	0.082572	0.082572
APZ_UPPER_binary		161.0	-0.106843	1.392109e-17	-0.106843	-0.106843	-0.106843	-0.106843	-0.106843
BOLLI_500_P_LOWER_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
BOLLI_500_P_MID_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
BOLLI_500_P_UPPER_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_C_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_R1_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_R2_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_R3_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_R4_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_R5_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_R6_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_S1_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_S2_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_S3_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_S4_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_S5_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CP+_S6_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
LIN_REG_binary		161.0	0.055904	1.002946e+00	-0.975470	-0.975470	1.025147	1.025147	1.025147
LIN_REG_INTERCEPT_binary		161.0	-0.036712	1.004025e+00	-1.043850	-1.043850	0.957992	0.957992	0.957992
OBV_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
VROC_binary		161.0	0.083313	1.660656e+00	-0.047565	-0.047565	-0.047565	-0.047565	21.02379
VWAP_binary		161.0	-0.028866	1.001195e+00	-0.949362	-0.949362	-0.949362	1.053339	1.053339
VWAP_CLOUD_HIGH_binary		161.0	-0.046753	9.558273e-01	-0.425833	-0.425833	-0.425833	-0.425833	-0.425833
VWAP_CLOUD_LOW_binary		161.0	-0.005965	1.007665e+00	-2.022858	0.494350	0.494350	0.494350	0.494350
VWAP_L1_binary		161.0	-0.000390	1.003268e+00	-1.448414	-1.448414	0.690411	0.690411	0.690411
VWAP_L2_binary		161.0	0.055931	9.323624e-01	-2.742122	0.364681	0.364681	0.364681	0.364681
VWAP_U1_binary		161.0	-0.039410	9.839893e-01	-0.640959	-0.640959	-0.640959	1.560163	1.560163
VWAP_U2_binary		161.0	-0.027847	9.651728e-01	-0.336252	-0.336252	-0.336252	-0.336252	2.9739
ZIGZAG_HIGH_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
ZIGZAG_LOW_binary		161.0	0.047565	0.000000e+00	0.047565	0.047565	0.047565	0.047565	0.047565
14_MA_ENVELOPES_LOWER_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
14_MA_ENVELOPES_MID_binary		161.0	0.055904	1.002946e+00	-0.975470	-0.975470	1.025147	1.025147	1.025147
14_MA_ENVELOPES_UPPER_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
VOLUME_DOWN_binary		161.0	0.083313	1.660656e+00	-0.047565	-0.047565	-0.047565	-0.047565	21.02379
CP__S1_binary		161.0	-0.114248	1.010358e+00	-1.127739	-1.127739	0.886730	0.886730	0.886730
BOLLI_500_MID_binary		161.0	-0.001659	1.003235e+00	-1.072607	-1.072607	0.932308	0.932308	0.932308
BOLLI_500_UPPER_binary		161.0	-0.067480	9.820797e-01	-0.762983	-0.762983	-0.762983	1.310645	1.310645
CP__C_binary		161.0	-0.121489	9.915214e-01	-0.966694	-0.966694	-0.966694	1.034453	1.034453
VOLUME_binary		161.0	0.117956	1.657334e+00	-0.067344	-0.067344	-0.067344	-0.067344	14.849
CP__R4_binary		161.0	-0.015111	9.776353e-01	-0.279032	-0.279032	-0.279032	-0.279032	3.58381
CP__R5_binary		161.0	-0.088970	5.918357e-01	-0.135613	-0.135613	-0.135613	-0.135613	7.37394
BOLLI_500_LOWER_binary		161.0	-0.048119	1.021979e+00	-1.502449	-1.502449	0.665580	0.665580	0.665580
CP__S5_binary		161.0	-0.052497	1.080908e+00	-3.414256	0.292890	0.292890	0.292890	0.292890
CP__S2_binary		161.0	-0.056564	1.016676e+00	-1.304308	-1.304308	0.766690	0.766690	0.766690
CP__R3_binary		161.0	-0.054115	9.644463e-01	-0.532971	-0.532971	-0.532971	-0.532971	1.87627
CP__S6_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
CHAIKIN_binary		161.0	0.000000	0.000000e+00	0.000000	0.000000	0.000000	0.000000	0.000000
VOLUME_UP_binary		161.0	0.083313	1.660656e+00	-0.047565	-0.047565	-0.047565	-0.047565	21.02379
CP__R2_binary		161.0	-0.056245	9.734355e-01	-0.623470	-0.623470	-0.623470	1.603927	1.603927
CP__R6_binary		161.0	-0.047565	6.960544e-18	-0.047565	-0.047565	-0.047565	-0.047565	-0.047565
CP__S4_binary		161.0	-0.057982	1.038093e+00	-1.828425	-1.828425	0.546919	0.546919	0.546919

Loss Mitigation Analysis

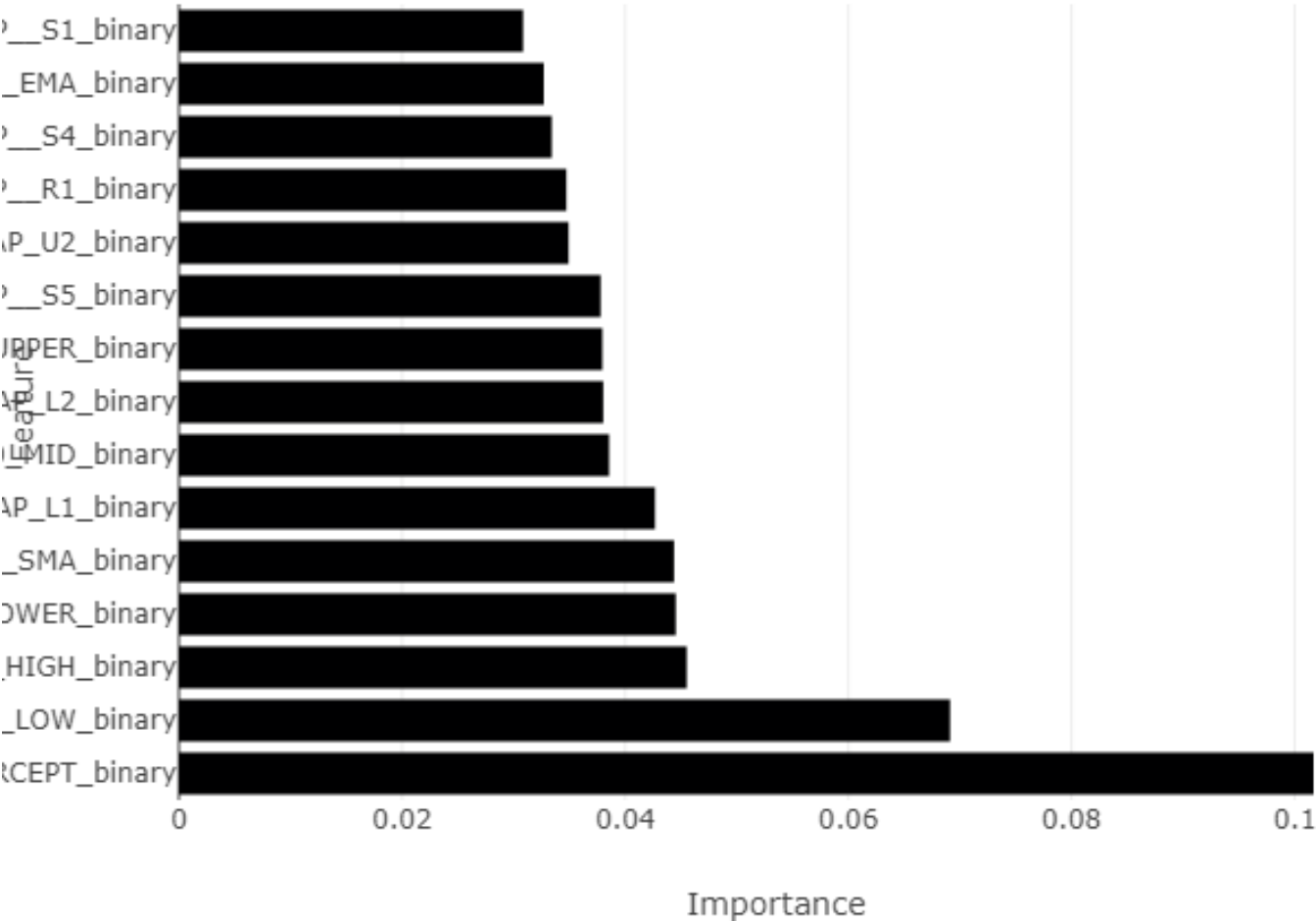
CP__S3_binary	161.0	-0.043715	1.018186e+00	-1.433587	-1.433587	0.697551	0.697551	0.697551
CP__R1_binary	161.0	-0.058451	9.887135e-01	-0.808075	-0.808075	-0.808075	1.237509	1.237509

Confusion Matrix

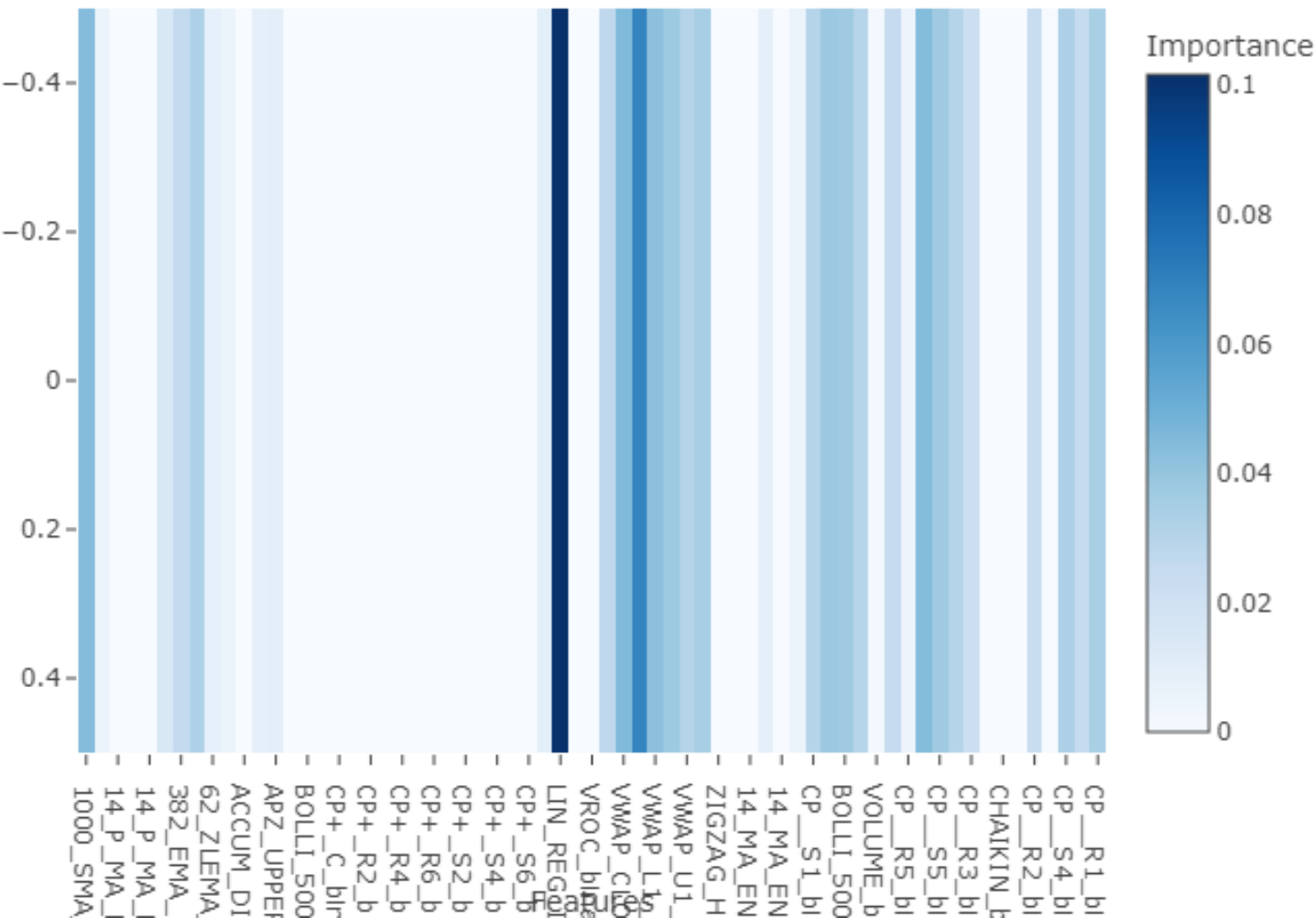




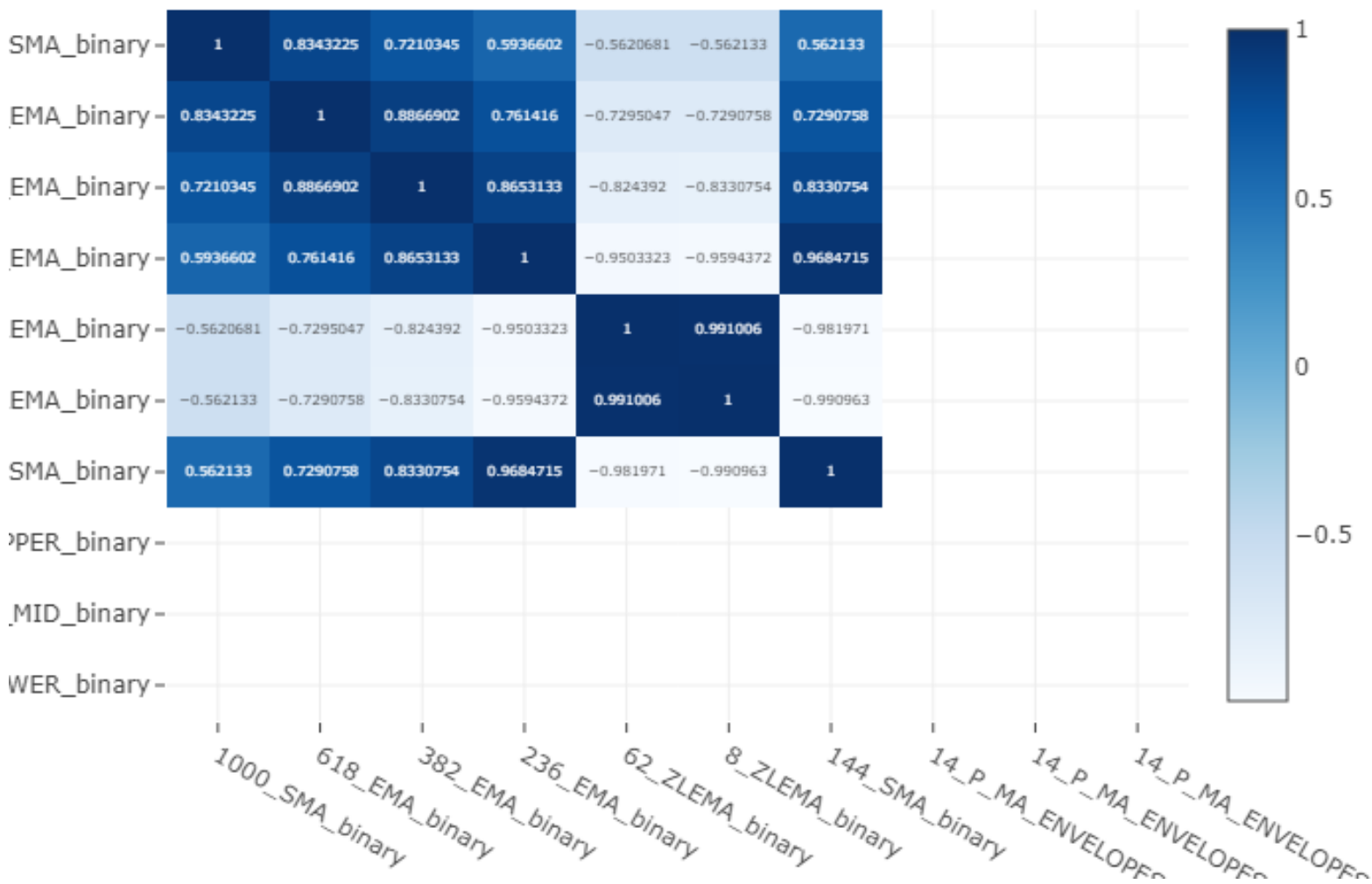
Feature Importance



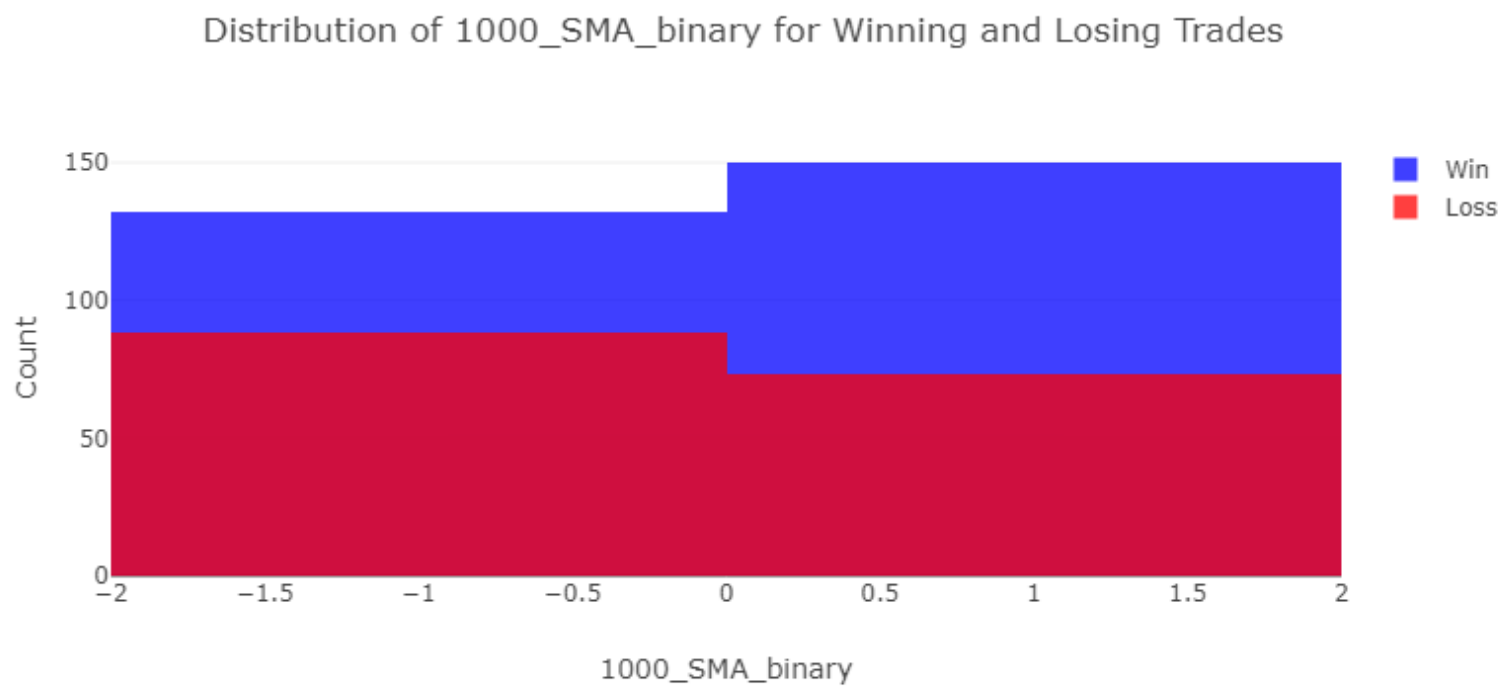
Feature Importance Heatmap



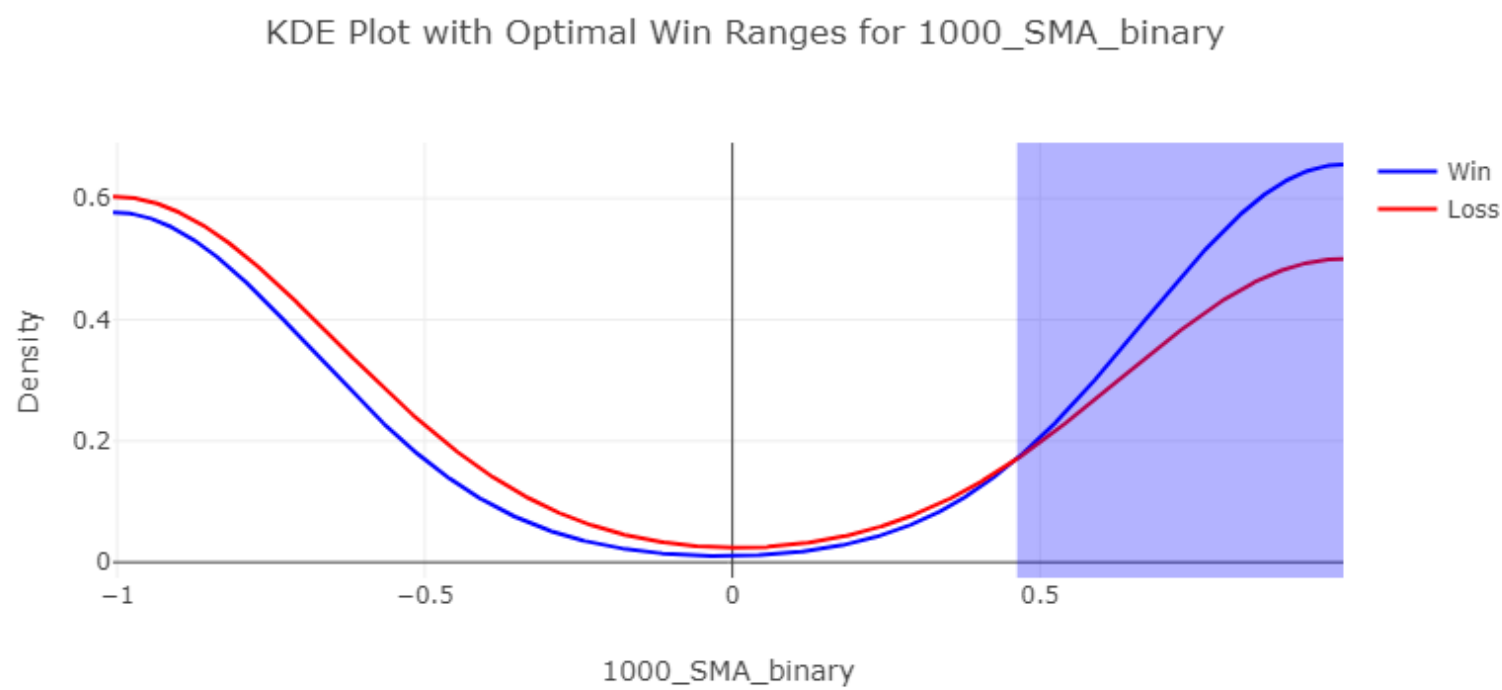
### Correlation Matrix of Top Indicators



Distribution of 1000\_SMA\_binary for Winning and Losing Trades



KDE Plot with Optimal Win Ranges for 1000\_SMA\_binary



Mean Indicator Values for Losses

