

| Classification Report | | | | |
|-----------------------|-----------|--------|----------|---------|
| | precision | recall | f1-score | support |
| 0 | 0.66 | 0.92 | 0.77 | 59 |
| 1 | 0.29 | 0.07 | 0.11 | 30 |
| accuracy | | | 0.63 | 89 |
| macro avg | 0.47 | 0.49 | 0.44 | 89 |
| weighted avg | 0.53 | 0.63 | 0.54 | 89 |

Accuracy
Accuracy: 0.6292134831460674

Optimal Win Ranges Summary

| | feature | optimal_win_range_start | optimal_win_range_end | |
|----|------------------------------------|-------------------------|-----------------------|-----------|
| 0 | 62_ZLEMA_percent_away | -8.786650 | -0.965696 | |
| 1 | 62_ZLEMA_percent_away | -0.547782 | 0.120880 | |
| 2 | 62_ZLEMA_percent_away | 1.171634 | 3.141798 | |
| 3 | ADX | -0.476944 | 1.647026 | |
| 4 | ADX | 1.982632 | 2.736595 | |
| 5 | CHAIKIN | -2.835997 | 0.238950 | |
| 6 | CHAIKIN | 2.994954 | 3.559240 | |
| 7 | CHAIKIN | 5.284809 | 5.333877 | |
| 8 | DM_ADX_PLOT | -0.476944 | 1.647026 | |
| 9 | DM_ADX_PLOT | 1.982632 | 2.736595 | |
| 10 | VOLUME | -1.293947 | -0.037950 | |
| 11 | VOLUME | 0.925387 | 1.650938 | |
| 12 | VOLUME | 1.846044 | 2.358198 | |
| 13 | RIND | -0.704866 | 0.693373 | |
| 14 | RSI_DEFAULT | -1.712182 | -0.500043 | |
| 15 | RSI_DEFAULT | 1.478260 | 9.711659 | |
| 16 | VROC | -0.838718 | -0.049433 | |
| 17 | VROC | 3.495545 | 4.325655 | |
| 18 | VROC | 5.686491 | 5.958658 | |
| 19 | 1000_SMA_percent_away | -2.513960 | -1.638706 | |
| 20 | 1000_SMA_percent_away | 0.217678 | 1.954068 | |
| 21 | 1000_SMA_percent_away | 3.584581 | 4.537478 | |
| 22 | 14_MA_ENVELOPES_UPPER_percent_away | | -2.598799 | -1.112025 |
| 23 | 14_MA_ENVELOPES_UPPER_percent_away | | -0.485368 | 0.067564 |
| 24 | 14_MA_ENVELOPES_UPPER_percent_away | | 1.511332 | 3.538751 |

Loss Mitigation Analysis

| | count | mean | std | min | 25% | 50% | 75% | max | |
|--------------------------------------|-------|-----------|--------------|-----------|-----------|-----------|-----------|----------|-------|
| ADX | 161.0 | -0.086724 | 1.033868e+00 | -1.856146 | -0.816921 | -0.279124 | 0.611044 | 2.684127 | |
| AROON_DOWN | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.0 |
| AROON_UP | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000 |
| ATR | 161.0 | 0.089757 | 9.908347e-01 | -1.569222 | -0.625525 | -0.094696 | 0.731039 | 3.473657 | |
| AWESOME | 161.0 | -0.039341 | 9.819450e-01 | -1.229055 | -1.014987 | -0.558666 | 0.982758 | 1.162 | |
| CCI | 161.0 | -0.042472 | 1.017479e+00 | -1.710272 | -1.018385 | -0.132852 | 0.930918 | 1.539593 | |
| CHAIKIN | 161.0 | 0.152176 | 1.065306e+00 | -2.835997 | -0.381632 | -0.038888 | 0.535399 | 4.8915 | |
| CMO | 161.0 | -0.033158 | 9.753289e-01 | -2.427354 | -0.717361 | -0.041638 | 0.634085 | 2.821059 | |
| DISPARITY_INDEX | 161.0 | 0.062717 | 7.841291e-01 | -2.137917 | -0.022680 | -0.022680 | -0.022680 | 2.1 | |
| DM_ADX_PLOT | 161.0 | -0.086724 | 1.033868e+00 | -1.856146 | -0.816921 | -0.279124 | 0.611044 | 2.1 | |
| DM_DI_MINUS | 161.0 | 0.016292 | 9.882151e-01 | -2.355034 | -0.847005 | 0.258633 | 0.852820 | 1.56 | |
| DM_DI_PLUS | 161.0 | -0.036719 | 9.123487e-01 | -2.164098 | -0.778099 | 0.060892 | 0.740956 | 1.40 | |
| DYNAMIC_MOMENTUM | 161.0 | 0.024852 | 9.822374e-01 | -1.147007 | -1.128881 | 0.117277 | 1.181169 | | |
| FISHER_TRANSFORM | 161.0 | -0.034812 | 9.922686e-01 | -1.176961 | -1.165929 | -0.299934 | 1.109376 | | |
| LIN_REG_SLOPE | 161.0 | -0.063989 | 1.012748e+00 | -1.830464 | -1.000933 | -0.159880 | 0.888555 | 1.1 | |
| MACD_AVG | 161.0 | -0.037604 | 9.413144e-01 | -1.324624 | -0.938041 | -0.531749 | 0.891787 | 1.24 | |
| MACD_DEFAULT | 161.0 | -0.042298 | 9.567781e-01 | -1.278772 | -0.975890 | -0.557781 | 0.926998 | 1.1 | |
| MACD_DIFF | 161.0 | -0.013007 | 7.318337e-01 | -1.361020 | -0.571660 | -0.030803 | 0.539290 | 1.44 | |
| MFI | 161.0 | 0.090901 | 9.776886e-01 | -1.900620 | -0.671071 | 0.160100 | 0.961028 | 2.040925 | |
| MOMENTUM | 161.0 | -0.029736 | 9.765790e-01 | -2.518763 | -0.537387 | -0.042043 | 0.453301 | 2.93 | |
| PFE | 161.0 | -0.036801 | 9.785148e-01 | -1.279243 | -1.097408 | -0.272154 | 1.070633 | 1.210506 | |
| RIND | 161.0 | 0.024435 | 1.066203e+00 | -1.480718 | -0.967343 | -0.046757 | 0.863972 | 2.777942 | |
| RSI_AVERAGE | 161.0 | -0.019465 | 9.643881e-01 | -1.611402 | -0.846854 | -0.350340 | 0.833380 | 1.5 | |
| RSI_DEFAULT | 161.0 | 0.045158 | 8.068842e-01 | -1.696035 | -0.501174 | -0.016771 | 0.713870 | 1.61 | |
| RSS | 161.0 | -0.052284 | 9.967916e-01 | -1.288471 | -1.123238 | -0.145975 | 1.021024 | 1.234005 | |
| RVI | 161.0 | -0.036774 | 9.868984e-01 | -1.346030 | -1.008510 | -0.618802 | 0.959318 | 1.300526 | |
| R_SQUARED | 161.0 | 0.079282 | 1.223987e+00 | -0.235038 | -0.235038 | -0.235038 | -0.235038 | 6.4 | |
| STOCH_FAST_D | 161.0 | -0.060309 | 9.996305e-01 | -1.187456 | -1.017111 | -0.856491 | 0.951241 | 1.1 | |
| STOCH_FAST_K | 161.0 | 0.047957 | 1.016528e+00 | -1.801193 | -0.996574 | 0.103517 | 1.034170 | 2.1 | |
| TRIX_DEFAULT | 161.0 | -0.004517 | 9.583570e-01 | -1.377299 | -0.037796 | -0.037796 | 1.301707 | 1.3 | |
| TRIX_SIGNAL | 161.0 | 0.023098 | 9.486039e-01 | -1.406677 | -0.044583 | -0.044583 | 1.317511 | 1.31 | |
| VOLUME | 161.0 | 0.087517 | 1.092542e+00 | -1.293947 | -0.671360 | -0.131785 | 0.333772 | 4.561 | |
| VOLUME_DOWN | 161.0 | -0.007181 | 9.923741e-01 | -0.694961 | -0.694961 | -0.694961 | 0.478686 | 4.1 | |
| VOLUME_UP | 161.0 | 0.097487 | 1.161919e+00 | -0.655680 | -0.655680 | -0.449074 | 0.563224 | 5.3 | |
| VORTEX_MINUS | 161.0 | 0.056227 | 9.905588e-01 | -1.356432 | -0.994989 | 0.270063 | 1.083310 | 1.1 | |
| VORTEX_PLUS | 161.0 | -0.047229 | 9.841298e-01 | -1.242821 | -1.151938 | -0.243107 | 1.029256 | 1.4 | |
| VROC | 161.0 | 0.111302 | 1.098421e+00 | -0.830880 | -0.545617 | -0.256553 | 0.348074 | 5.32693 | |
| WILLIAMS_%R | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.0 | |
| strategy_amount | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000 | |
| account_amount | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000 | |
| DIV_BULL | 161.0 | 0.060427 | 1.003068e+00 | -0.971073 | -0.971073 | 1.029789 | 1.029789 | 1.0297 | |
| DIV_BEAR | 161.0 | -0.060427 | 1.003068e+00 | -1.029789 | -1.029789 | -1.029789 | 0.971073 | 0.971 | |
| CHOP_INDEX | 161.0 | 0.065839 | 9.944245e-01 | -1.380297 | -0.664986 | -0.384246 | 0.717563 | 2.53 | |
| AROON_UP | 161.0 | -0.032107 | 9.884962e-01 | -1.223579 | -1.223579 | 0.163214 | 0.933510 | 0.93 | |
| AROON_DOWN | 161.0 | 0.062059 | 1.002952e+00 | -1.159877 | -1.159877 | 0.993562 | 0.993562 | 0.99 | |
| ACCUM_DIST | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000 | |
| OBV | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | |
| WILLIAMS_R | 161.0 | 0.047957 | 1.016528e+00 | -1.801193 | -0.996574 | 0.103517 | 1.034170 | 2.50 | |
| CHANDE_CMO | 161.0 | -0.033158 | 9.753289e-01 | -2.427354 | -0.717361 | -0.041638 | 0.634085 | 2.8 | |
| TSI | 161.0 | -0.042233 | 9.612796e-01 | -1.273517 | -1.042728 | -0.231375 | 0.967703 | 1.188235 | |
| 1000_SMA_percent_away | 161.0 | -0.054289 | 9.694624e-01 | -2.284117 | -0.560677 | -0.082181 | 0.619672 | | |
| 144_SMA_percent_away | 161.0 | -0.007900 | 8.741756e-01 | -1.824832 | -0.752271 | -0.264145 | 0.761354 | | |
| 14_P_MA_ENVELOPES_LOWER_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.0000 | |
| 14_P_MA_ENVELOPES_MID_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | |
| 14_P_MA_ENVELOPES_UPPER_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | |
| 236_EMA_percent_away | 161.0 | -0.014981 | 9.109384e-01 | -2.278749 | -0.642888 | -0.107425 | 0.728828 | | |
| 382_EMA_percent_away | 161.0 | -0.022606 | 9.399239e-01 | -2.535754 | -0.650709 | 0.035614 | 0.624059 | | |
| 618_EMA_percent_away | 161.0 | -0.036559 | 9.591799e-01 | -2.526879 | -0.655269 | 0.014647 | 0.536922 | | |
| 62_ZLEMA_percent_away | 161.0 | 0.007904 | 8.283073e-01 | -1.842191 | -0.762863 | 0.200388 | 0.742982 | | |
| 8_ZLEMA_percent_away | 161.0 | 0.049304 | 9.555986e-01 | -1.970770 | -0.887448 | 0.737721 | 0.940378 | | |
| ACCUM_DIST_percent_away | 161.0 | 0.022234 | 9.860072e-01 | -0.970893 | -0.703996 | -0.253135 | 0.36119 | | |
| APZ_LOW_percent_away | 161.0 | 0.054962 | 9.560470e-01 | -2.011243 | -0.889745 | 0.744222 | 0.958067 | | |
| APZ_UPPER_percent_away | 161.0 | 0.038502 | 9.498152e-01 | -1.998469 | -0.900980 | 0.670735 | 0.966535 | | |

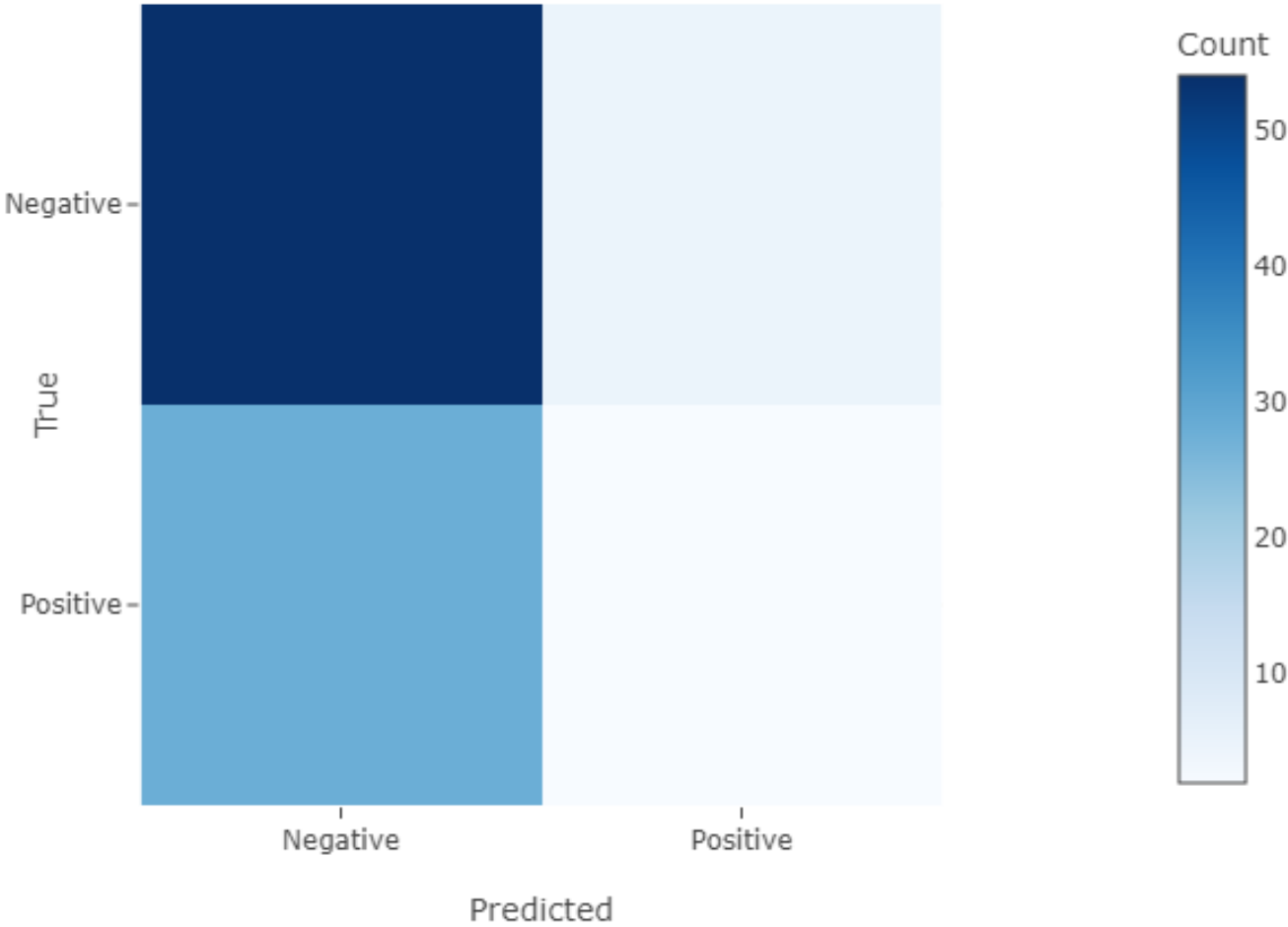
Loss Mitigation Analysis

| | | | | | | | | |
|------------------------------------|-------|-----------|--------------|------------|-----------|-----------|-----------|-----------|
| BOLLI_500_P_LOWER_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| BOLLI_500_P_MID_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| BOLLI_500_P_UPPER_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_C_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_R1_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_R2_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_R3_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_R4_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_R5_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_R6_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_S1_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_S2_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_S3_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_S4_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_S5_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CP+_S6_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| LIN_REG_percent_away | 161.0 | 0.051824 | 9.652111e-01 | -1.811486 | -0.908261 | 0.643023 | 0.979421 | 0.979421 |
| LIN_REG_INTERCEPT_percent_away | 161.0 | -0.029671 | 8.137825e-01 | -3.492166 | -0.370264 | -0.023743 | 0.23743 | 0.23743 |
| OBV_percent_away | 161.0 | 0.022494 | 9.879623e-01 | -1.007527 | -0.715813 | -0.253923 | 0.369669 | 4.169669 |
| VROC_percent_away | 161.0 | 0.102744 | 1.264883e+00 | 0.003057 | 0.003057 | 0.003057 | 0.003057 | 10.3057 |
| VWAP_percent_away | 161.0 | -0.004920 | 9.979144e-01 | -3.343468 | -0.425954 | 0.083211 | 0.534928 | 2.534928 |
| VWAP_CLOUD_HIGH_percent_away | 161.0 | 0.004632 | 9.941548e-01 | -4.238419 | -0.207008 | 0.492549 | 0.612549 | 0.612549 |
| VWAP_CLOUD_LOW_percent_away | 161.0 | -0.018531 | 1.020223e+00 | -0.668333 | -0.571711 | -0.530098 | 0.130098 | 0.130098 |
| VWAP_L1_percent_away | 161.0 | 0.033598 | 1.007244e+00 | -2.463562 | -0.550016 | -0.036018 | 0.560001 | 0.560001 |
| VWAP_L2_percent_away | 161.0 | 0.068150 | 1.024710e+00 | -1.805910 | -0.691588 | -0.158509 | 0.516157 | 0.516157 |
| VWAP_U1_percent_away | 161.0 | -0.033751 | 9.992960e-01 | -3.827084 | -0.460838 | 0.179575 | 0.614244 | 0.614244 |
| VWAP_U2_percent_away | 161.0 | -0.051815 | 1.004183e+00 | -4.045844 | -0.473131 | 0.310372 | 0.638305 | 0.638305 |
| ZIGZAG_HIGH_percent_away | 161.0 | 0.073162 | 8.982327e-01 | -4.632593 | -0.001429 | 0.414480 | 0.45899 | 0.45899 |
| ZIGZAG_LOW_percent_away | 161.0 | -0.063405 | 5.931957e-01 | -0.822025 | -0.336612 | -0.299673 | 0.03953 | 0.03953 |
| VOLUME_UP_percent_away | 161.0 | 0.083313 | 1.660656e+00 | -0.047565 | -0.047565 | -0.047565 | -0.047565 | -0.047565 |
| CP__R6_percent_away | 161.0 | -0.000669 | 1.020631e+00 | -2.499174 | -0.674171 | 0.014235 | 0.810805 | 0.810805 |
| CP__S6_percent_away | 161.0 | -0.077161 | 9.937800e-01 | -1.455098 | -0.881476 | -0.319022 | 0.445941 | 2.445941 |
| CHAIKIN_percent_away | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| BOLLI_500_UPPER_percent_away | 161.0 | -0.010971 | 9.792190e-01 | -3.612127 | -0.522336 | 0.158419 | 0.686419 | 0.686419 |
| CP__S3_percent_away | 161.0 | -0.080173 | 1.012653e+00 | -2.019182 | -0.910201 | -0.061938 | 0.557939 | 0.557939 |
| BOLLI_500_LOWER_percent_away | 161.0 | -0.027122 | 9.547062e-01 | -1.930522 | -0.745580 | -0.042059 | 0.492059 | 0.492059 |
| 14_MA_ENVELOPES_UPPER_percent_away | 161.0 | 0.038318 | 9.140882e-01 | -2.454637 | -0.863963 | 0.532139 | 0.532139 | 0.532139 |
| 14_MA_ENVELOPES_LOWER_percent_away | 161.0 | 0.038327 | 9.140363e-01 | -2.454502 | -0.864895 | 0.531873 | 0.531873 | 0.531873 |
| 14_MA_ENVELOPES_MID_percent_away | 161.0 | 0.038305 | 9.140535e-01 | -2.454700 | -0.863995 | 0.532908 | 0.532908 | 0.532908 |
| CP__S2_percent_away | 161.0 | -0.078610 | 1.015381e+00 | -2.040837 | -0.905768 | -0.048792 | 0.558686 | 0.558686 |
| VOLUME_DOWN_percent_away | 161.0 | 0.083313 | 1.660656e+00 | -0.047565 | -0.047565 | -0.047565 | -0.047565 | -0.047565 |
| CP__S1_percent_away | 161.0 | -0.076540 | 1.018175e+00 | -2.135086 | -0.833336 | -0.016894 | 0.557401 | 0.557401 |
| CP__R5_percent_away | 161.0 | -0.024394 | 1.028781e+00 | -2.759710 | -0.761173 | 0.167312 | 0.769370 | 0.769370 |
| CP__R4_percent_away | 161.0 | -0.048407 | 1.031246e+00 | -2.775388 | -0.755696 | 0.153103 | 0.661412 | 0.661412 |
| CP__R1_percent_away | 161.0 | -0.070768 | 1.023575e+00 | -2.393238 | -0.664270 | 0.041792 | 0.539985 | 0.539985 |
| CP__C_percent_away | 161.0 | -0.073930 | 1.020944e+00 | -2.269003 | -0.752572 | -0.009869 | 0.552733 | 2.552733 |
| CP__S5_percent_away | 161.0 | -0.081342 | 9.980795e-01 | -1.704626 | -0.812217 | -0.251391 | 0.550570 | 2.550570 |
| BOLLI_500_MID_percent_away | 161.0 | -0.019248 | 9.655642e-01 | -2.909324 | -0.632198 | 0.055874 | 0.57216 | 0.57216 |
| CP__R3_percent_away | 161.0 | -0.062898 | 1.027968e+00 | -2.599601 | -0.540786 | 0.157130 | 0.599208 | 0.599208 |
| VOLUME_percent_away | 161.0 | 0.102016 | 1.659005e+00 | -0.058243 | -0.058243 | -0.058243 | -0.058243 | -0.058243 |
| CP__S4_percent_away | 161.0 | -0.082394 | 1.005521e+00 | -1.915401 | -0.806777 | -0.171469 | 0.552755 | 0.552755 |
| CP__R2_percent_away | 161.0 | -0.067072 | 1.025950e+00 | -2.504379 | -0.569731 | 0.113497 | 0.541409 | 0.541409 |
| 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 |

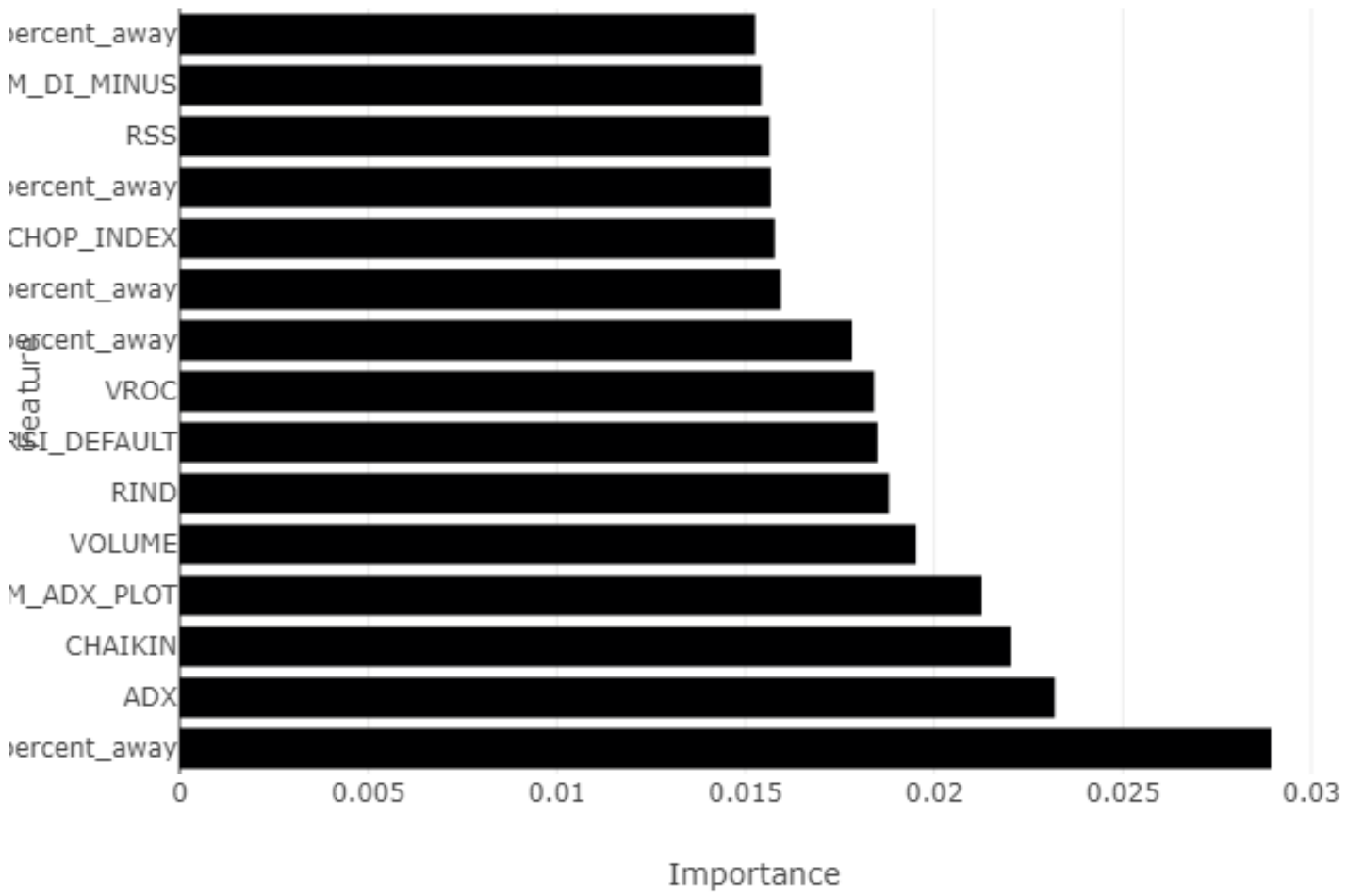
Loss Mitigation Analysis

| | | | | | | | | | |
|------------------------------|-------|-----------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|
| APZ_UPPER_binary | 161.0 | -0.106843 | 1.392109e-17 | -0.106843 | -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 | 0.000000 |
| BOLLI_500_P_MID_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 0.000000 |
| CP+_C_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 0.000000 |
| CP+_R2_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 0.000000 |
| CP+_R4_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 0.000000 |
| CP+_R6_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 0.000000 |
| CP+_S2_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 0.000000 |
| CP+_S4_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 0.000000 |
| CP+_S6_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 1.025147 |
| LIN_REG_INTERCEPT_binary | 161.0 | -0.036712 | 1.004025e+00 | -1.043850 | -1.043850 | 0.957992 | 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 | 0.000000 |
| VROC_binary | 161.0 | 0.083313 | 1.660656e+00 | -0.047565 | -0.047565 | -0.047565 | -0.047565 | 21.02 | 21.02 |
| VWAP_binary | 161.0 | -0.028866 | 1.001195e+00 | -0.949362 | -0.949362 | -0.949362 | 1.053339 | 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 | -0.425833 |
| VWAP_CLOUD_LOW_binary | 161.0 | -0.005965 | 1.007665e+00 | -2.022858 | 0.494350 | 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 | 0.690411 |
| VWAP_L2_binary | 161.0 | 0.055931 | 9.323624e-01 | -2.742122 | 0.364681 | 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 | 1.560163 |
| VWAP_U2_binary | 161.0 | -0.027847 | 9.651728e-01 | -0.336252 | -0.336252 | -0.336252 | -0.336252 | 2.9 | 2.9 |
| ZIGZAG_HIGH_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 0.047565 |
| 14_MA_ENVELOPES_LOWER_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 1.025147 |
| 14_MA_ENVELOPES_UPPER_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | -0.047565 | -0.047565 |
| CP__S1_binary | 161.0 | -0.114248 | 1.010358e+00 | -1.127739 | -1.127739 | 0.886730 | 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 | 0.932308 |
| BOLLI_500_UPPER_binary | 161.0 | -0.067480 | 9.820797e-01 | -0.762983 | -0.762983 | -0.762983 | 1.310645 | 1.310645 | 1.310645 |
| CP__C_binary | 161.0 | -0.121489 | 9.915214e-01 | -0.966694 | -0.966694 | -0.966694 | 1.034453 | 1.034453 | 1.034453 |
| VOLUME_binary | 161.0 | 0.117956 | 1.657334e+00 | -0.067344 | -0.067344 | -0.067344 | -0.067344 | 14.8 | 14.8 |
| CP__R4_binary | 161.0 | -0.015111 | 9.776353e-01 | -0.279032 | -0.279032 | -0.279032 | -0.279032 | 3.58 | 3.58 |
| CP__R5_binary | 161.0 | -0.088970 | 5.918357e-01 | -0.135613 | -0.135613 | -0.135613 | -0.135613 | 7.37 | 7.37 |
| BOLLI_500_LOWER_binary | 161.0 | -0.048119 | 1.021979e+00 | -1.502449 | -1.502449 | 0.665580 | 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 | 0.292890 |
| CP__S2_binary | 161.0 | -0.056564 | 1.016676e+00 | -1.304308 | -1.304308 | 0.766690 | 0.766690 | 0.766690 | 0.766690 |
| CP__R3_binary | 161.0 | -0.054115 | 9.644463e-01 | -0.532971 | -0.532971 | -0.532971 | -0.532971 | 1.87 | 1.87 |
| CP__S6_binary | 161.0 | 0.000000 | 0.000000e+00 | 0.000000 | 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 | 0.000000 |
| VOLUME_UP_binary | 161.0 | 0.083313 | 1.660656e+00 | -0.047565 | -0.047565 | -0.047565 | -0.047565 | 2 | 2 |
| CP__R2_binary | 161.0 | -0.056245 | 9.734355e-01 | -0.623470 | -0.623470 | -0.623470 | 1.603927 | 1.603927 | 1.603927 |
| CP__R6_binary | 161.0 | -0.047565 | 6.960544e-18 | -0.047565 | -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 | 0.546919 |
| CP__S3_binary | 161.0 | -0.043715 | 1.018186e+00 | -1.433587 | -1.433587 | 0.697551 | 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 | 1.237509 |

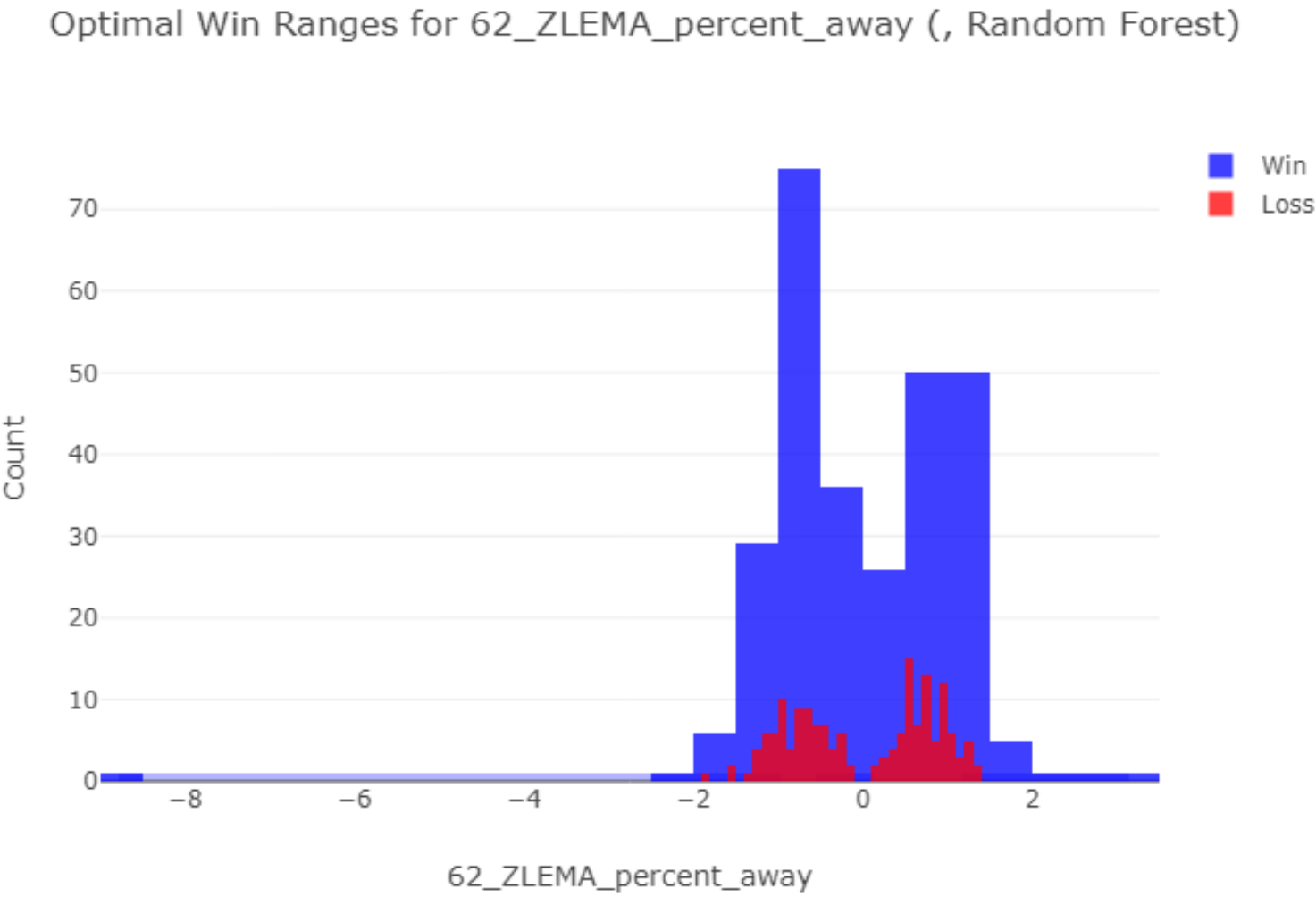
Confusion Matrix



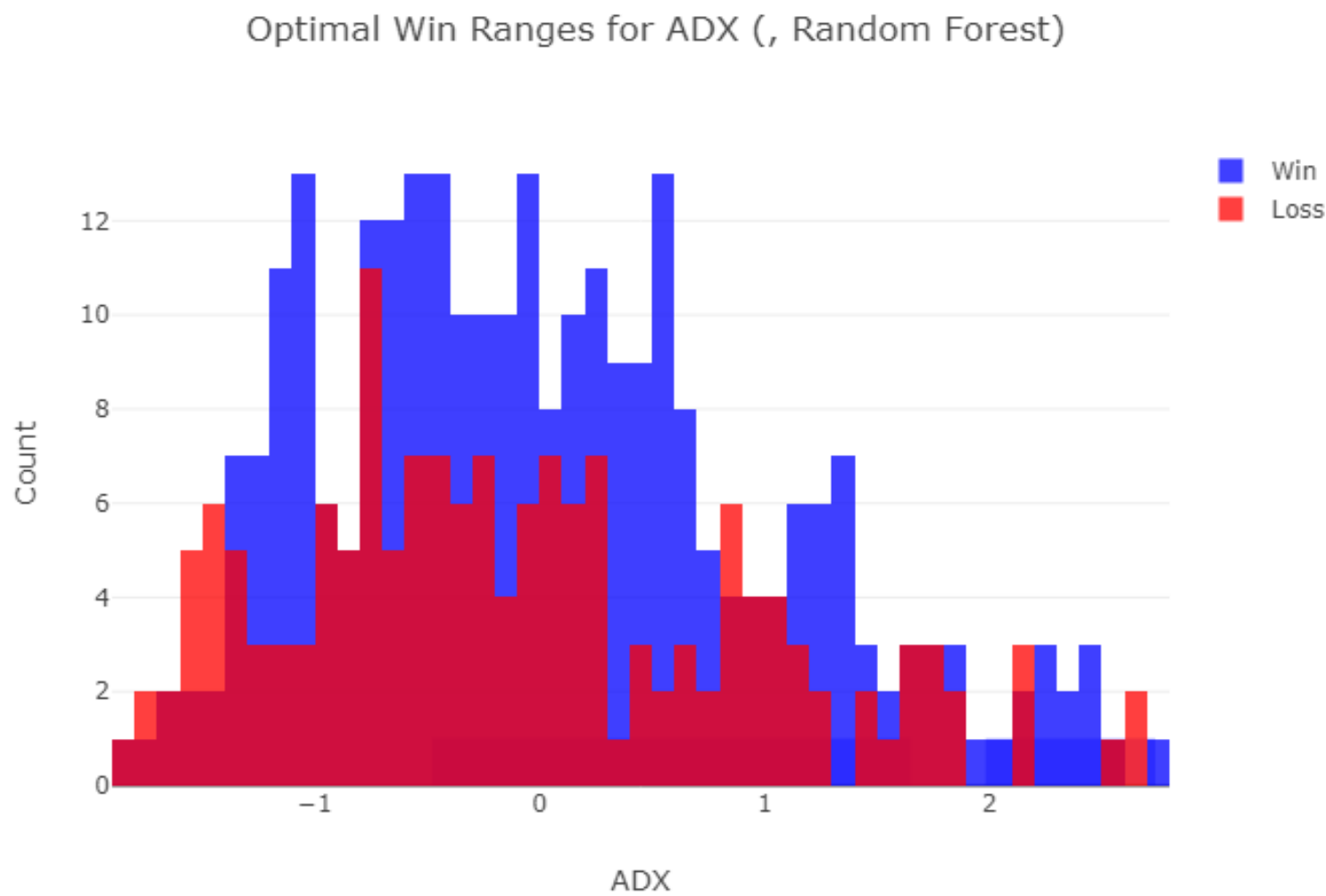
Feature Importance



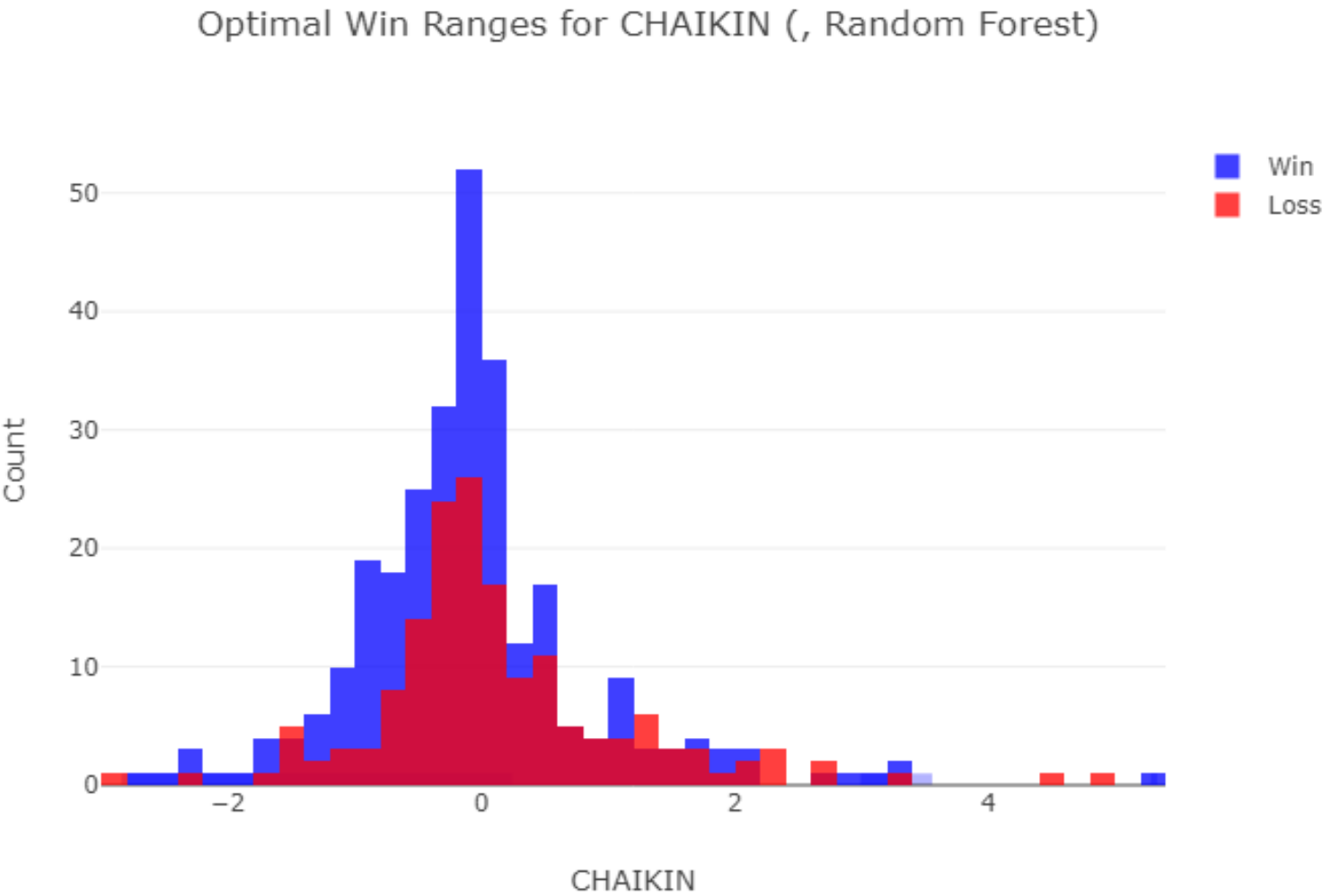
Optimal Win Ranges for 62_ZLEMA_percent_away (, Random Forest)



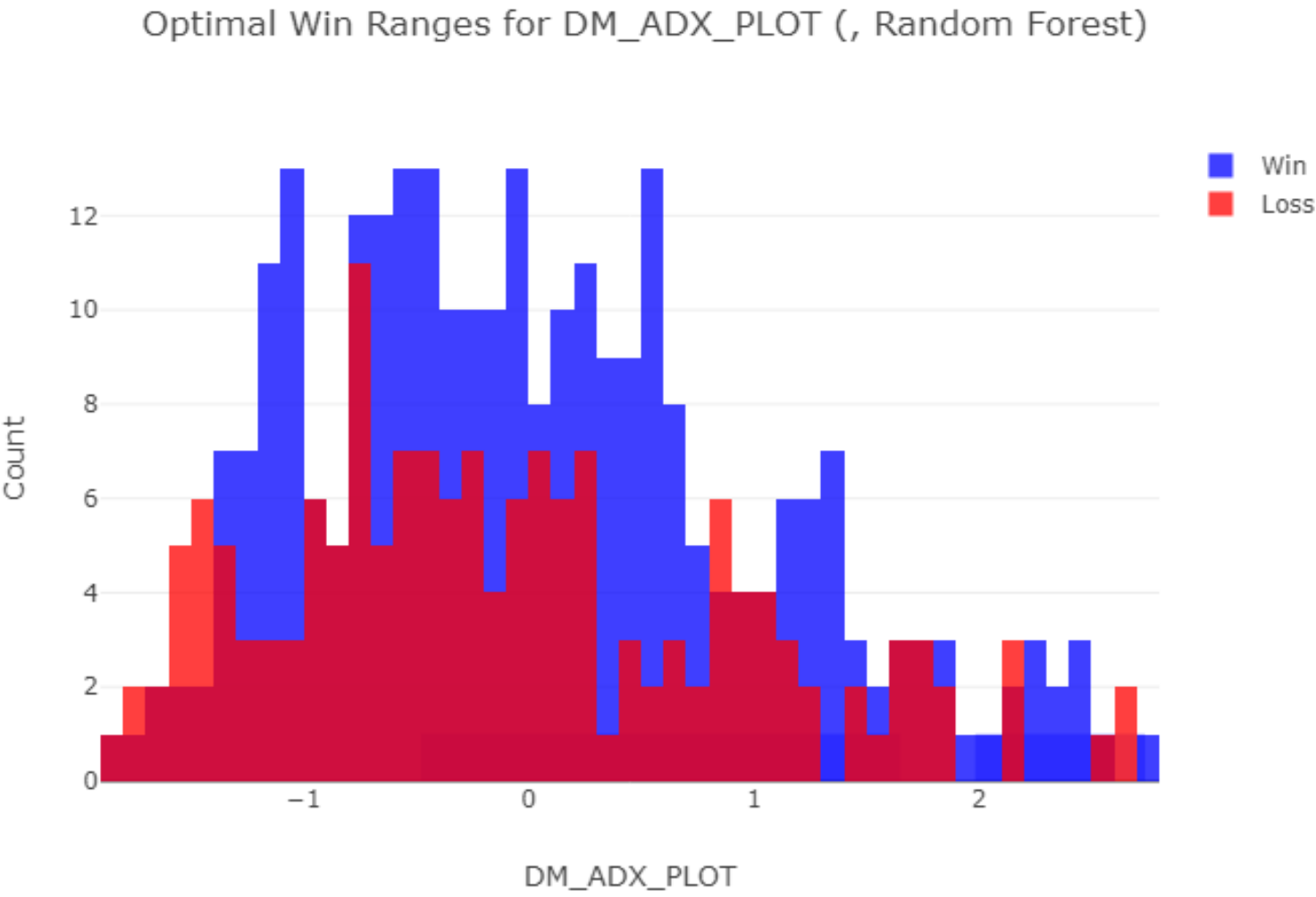
Optimal Win Ranges for ADX (, Random Forest)



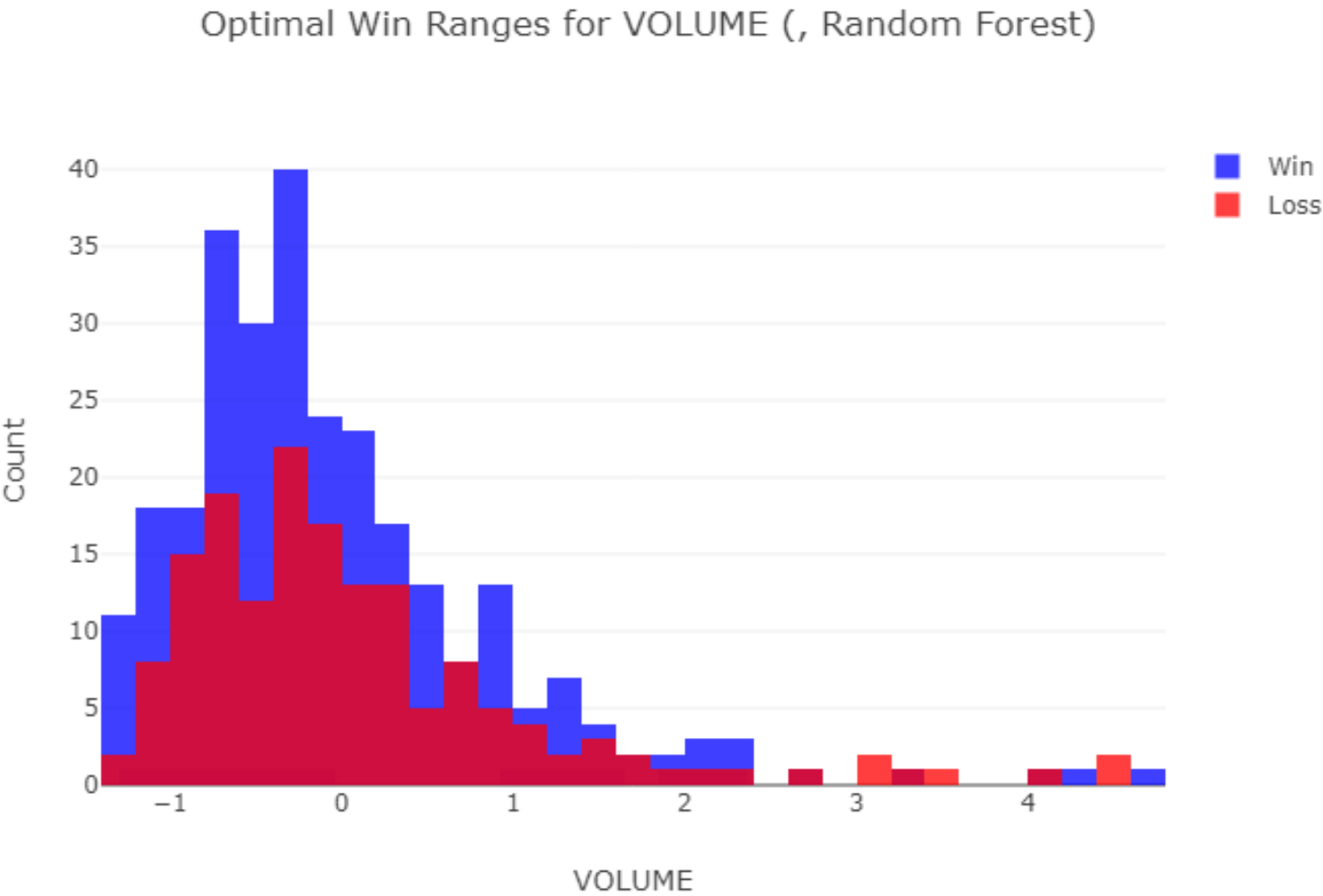
Optimal Win Ranges for CHAIKIN (, Random Forest)



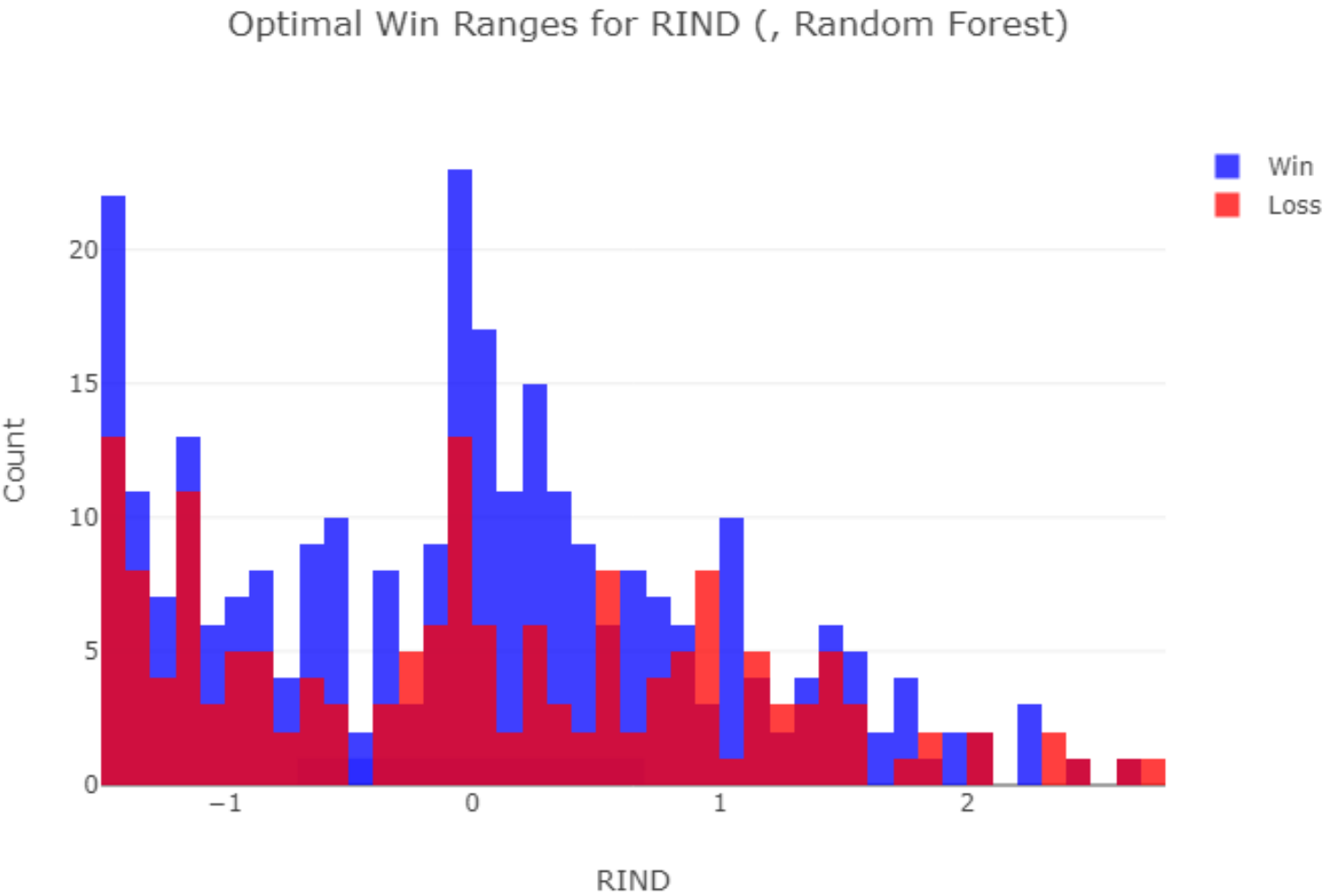
Optimal Win Ranges for DM_ADX_PLOT (, Random Forest)



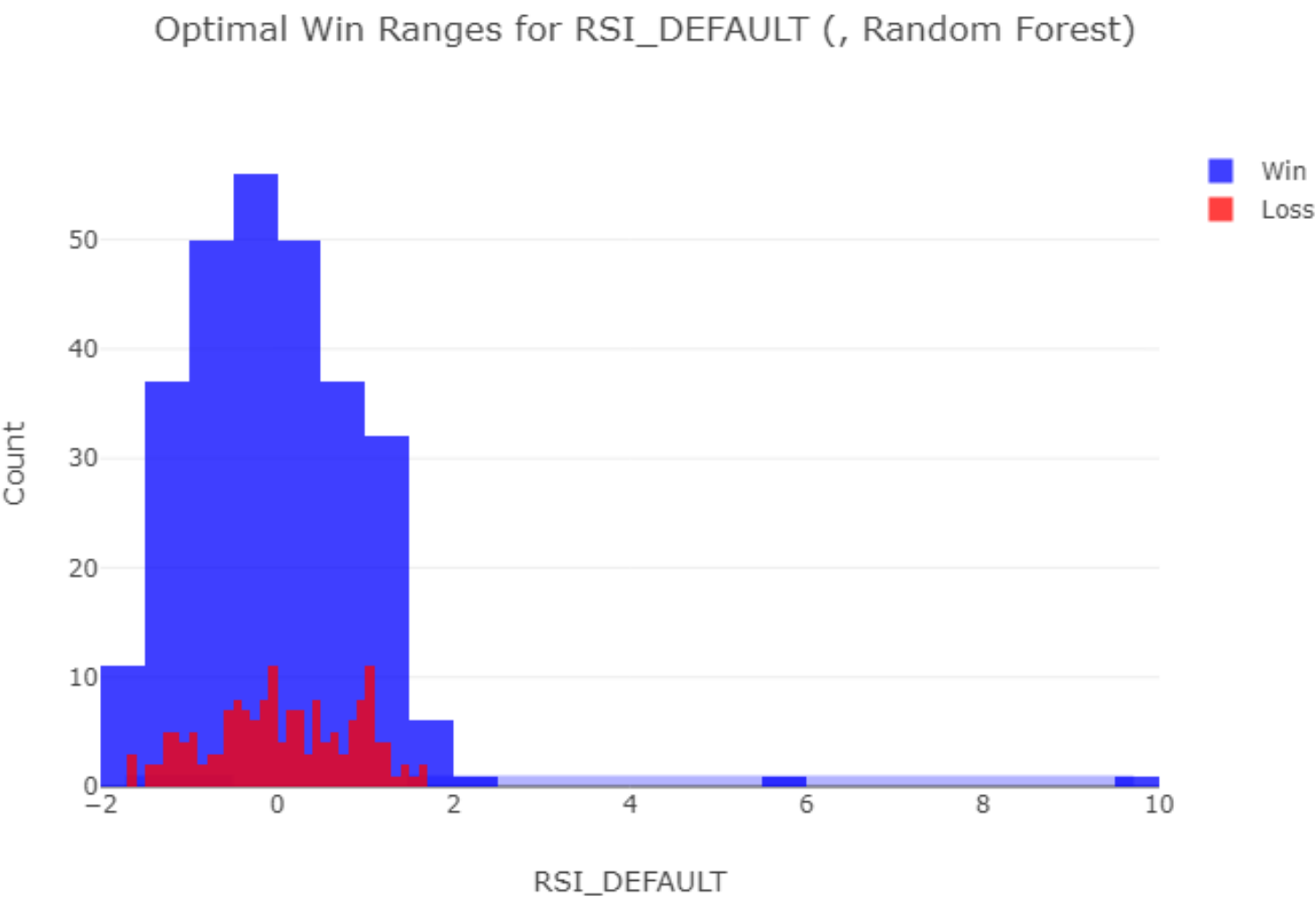
Optimal Win Ranges for VOLUME (, Random Forest)



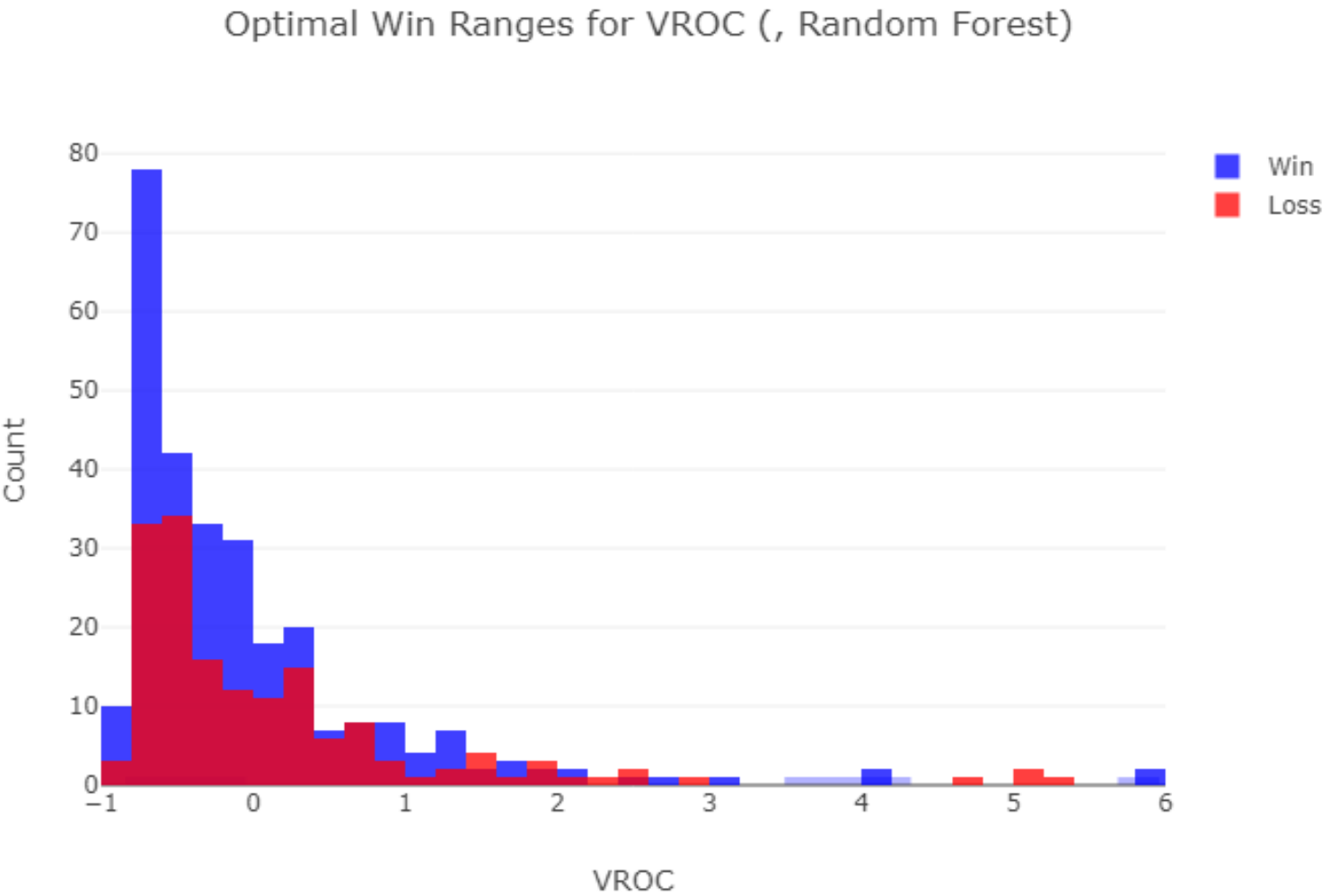
Optimal Win Ranges for RIND (, Random Forest)

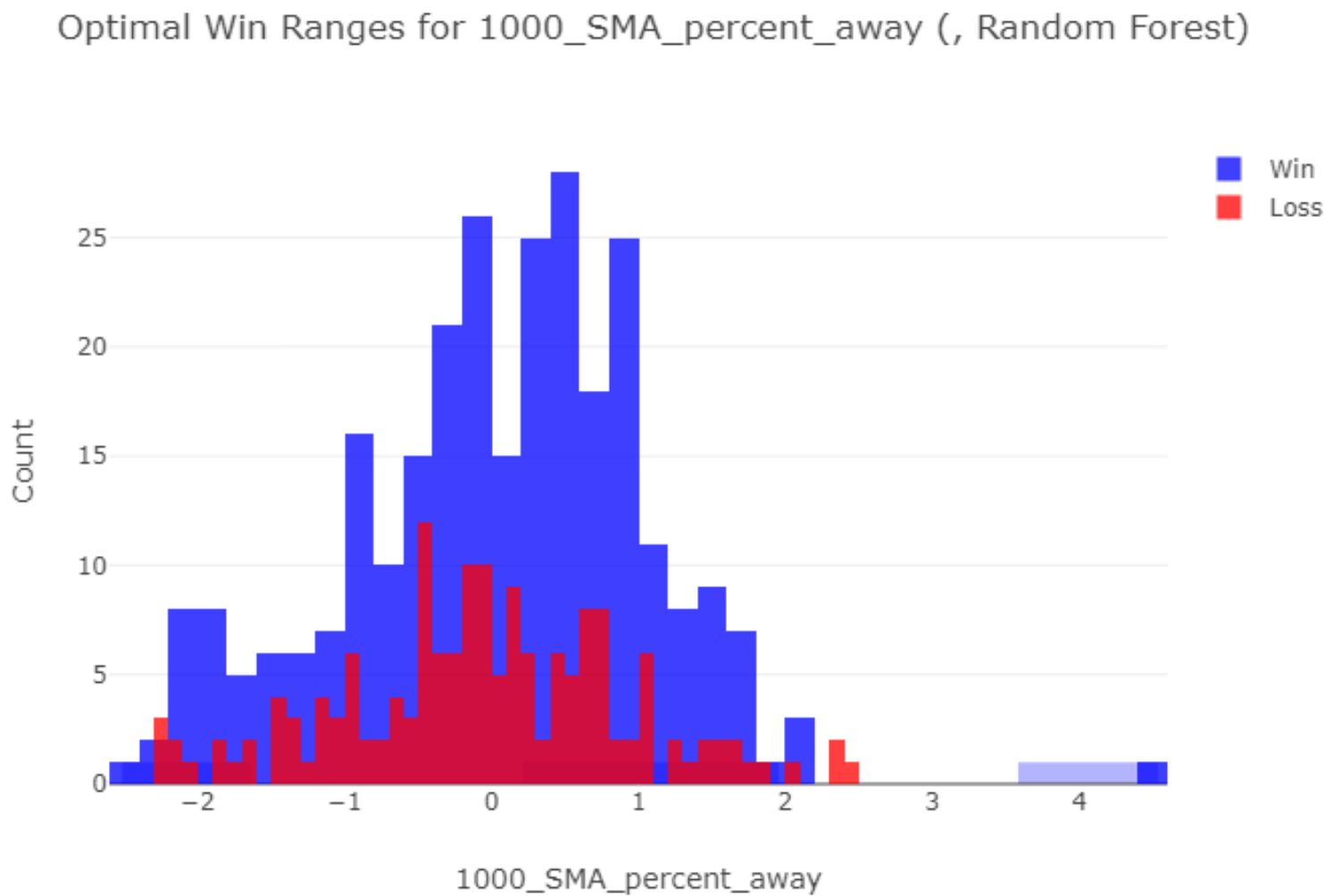


Optimal Win Ranges for RSI_DEFAULT (, Random Forest)



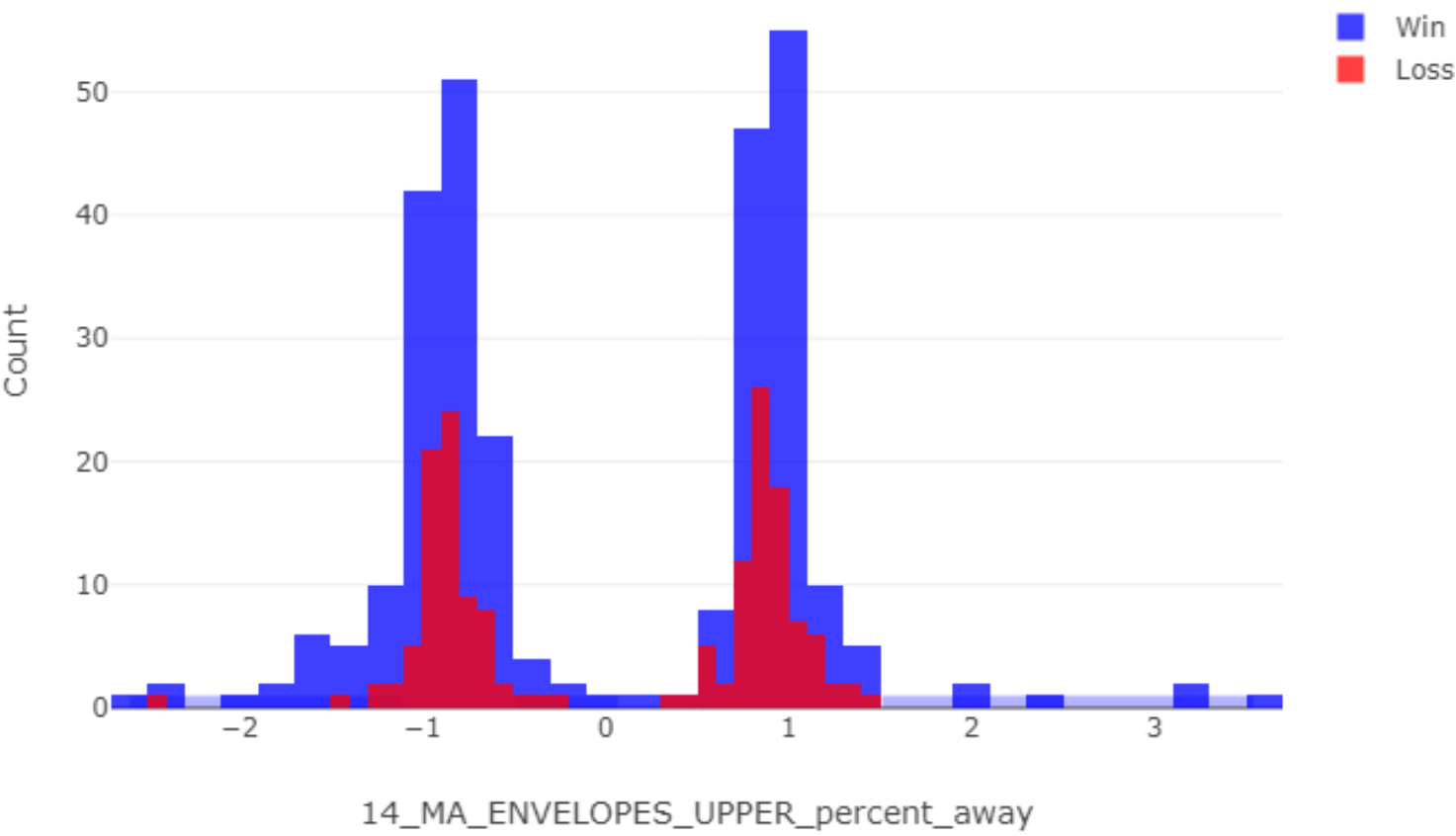
Optimal Win Ranges for VROC (, Random Forest)



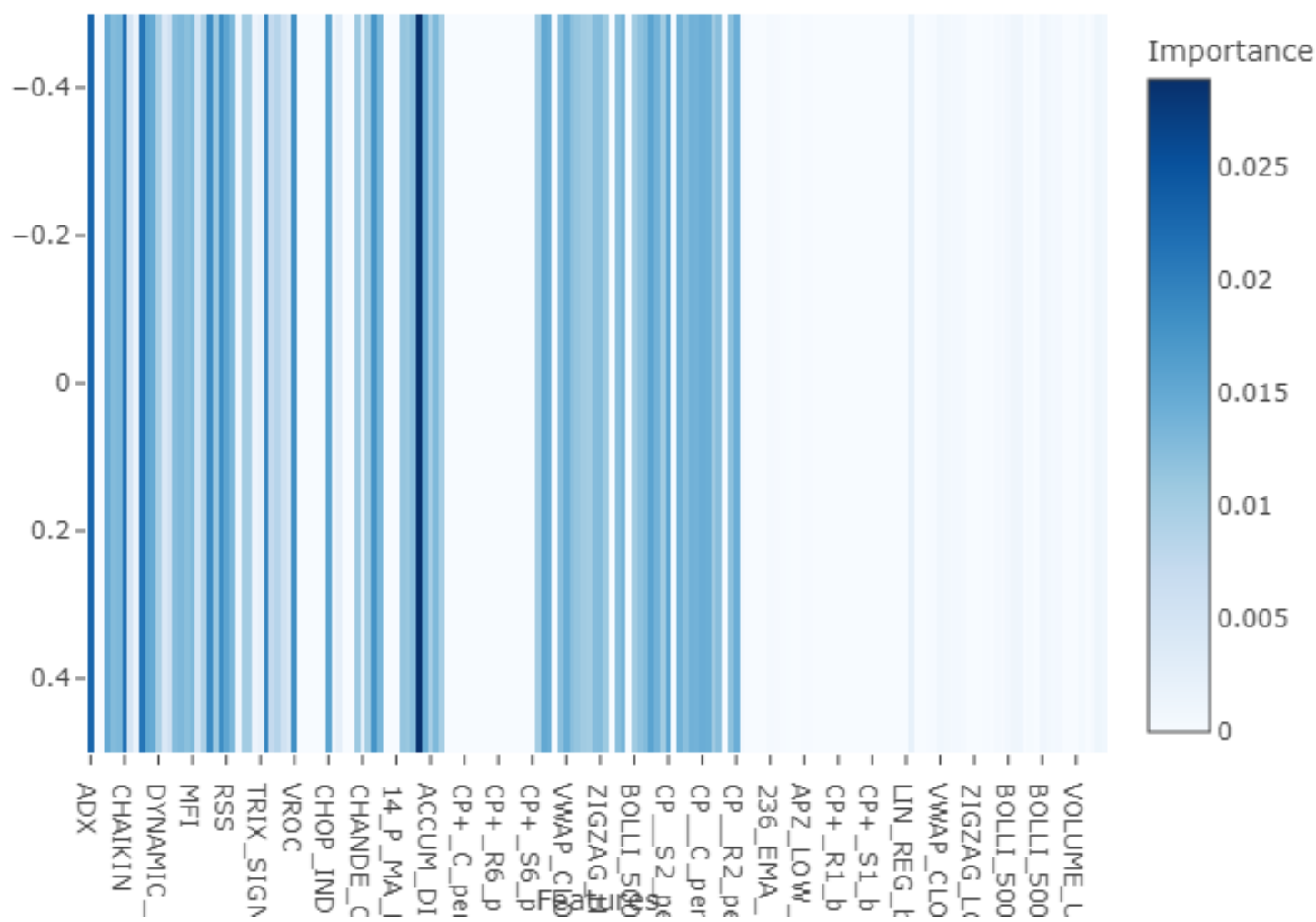


Optimal Win Ranges for 14_MA_ENVELOPES_UPPER_percent_away (, Random Forest)

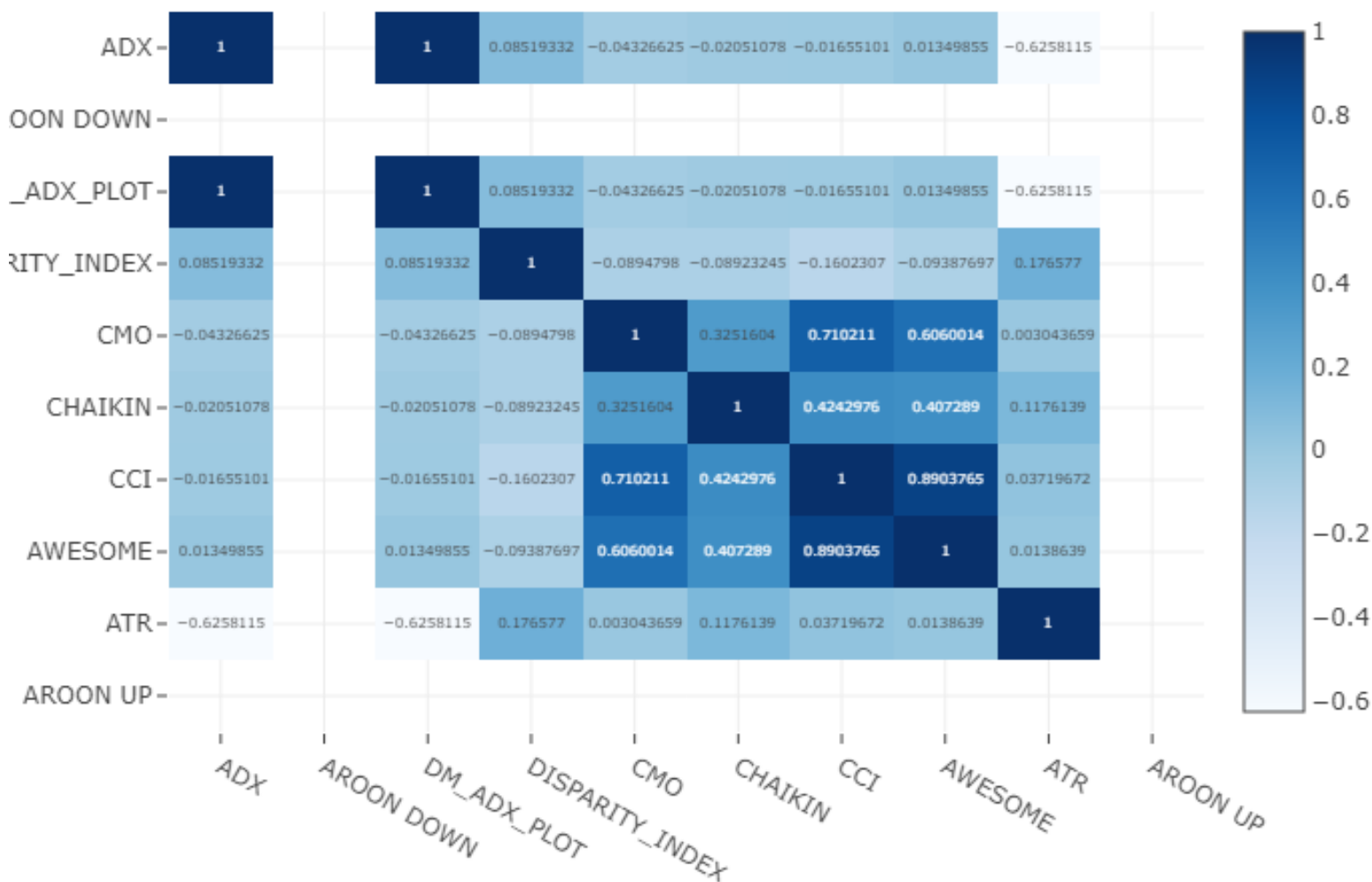
Optimal Win Ranges for 14_MA_ENVELOPES_UPPER_percent_away (, Random Forest)



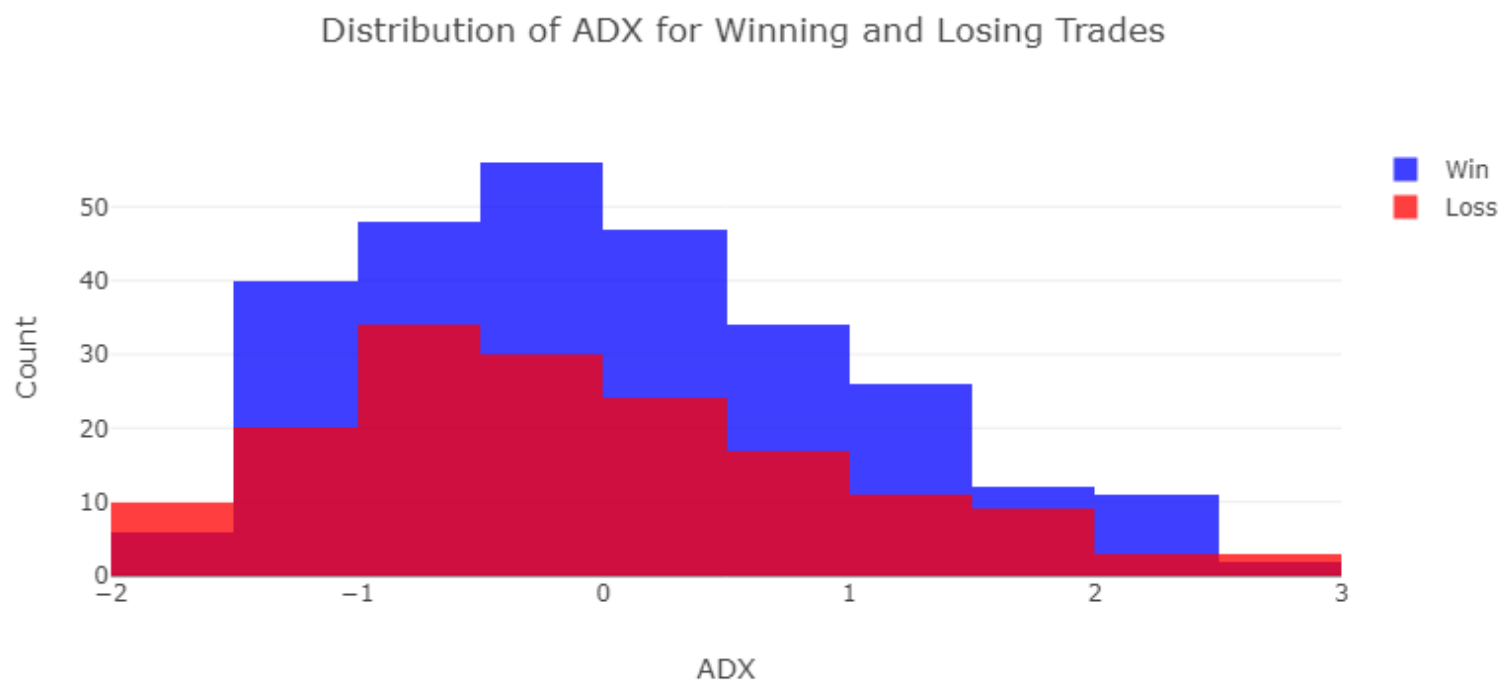
Feature Importance Heatmap



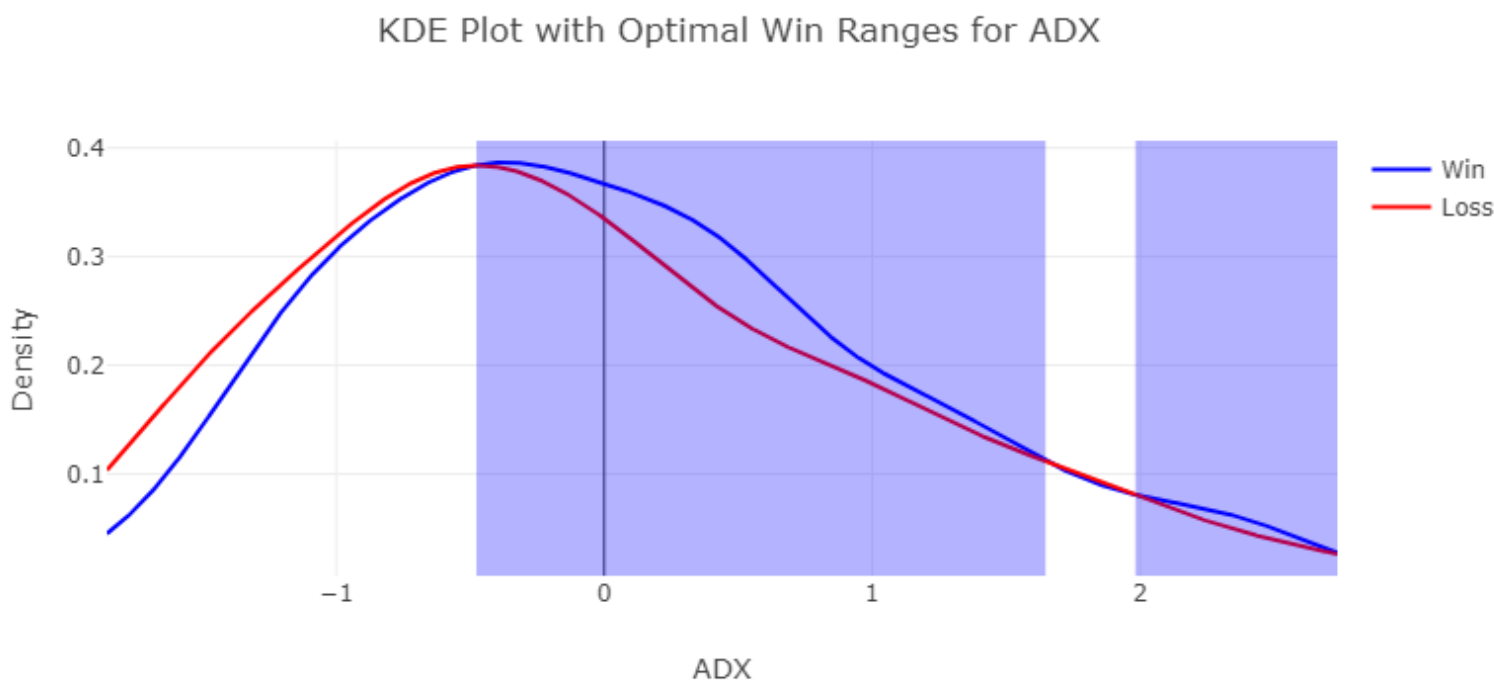
Correlation Matrix of Top Indicators



Distribution of ADX for Winning and Losing Trades



KDE Plot with Optimal Win Ranges for ADX



Mean Indicator Values for Losses

