Mean Squared Error
Mean Squared Error: 0.25158392668886687

Optimal Win Ranges Summary

	feature	optimal_win_range_start	optimal_win_range_end
0	DM_ADX_PLOT	-1.467355	-0.131227
1	LIN_REG_binary	-0.434397	0.405437
2	LIN_REG_binary	0.750604	1.016625
3	ZLEMA_13_binary	-0.467945	0.390894
4	ZLEMA_13_binary	0.810170	1.035588
5	ZIGZAG_LOW_percent_away	-0.845165	0.437999
6	ZIGZAG_LOW_percent_away	5.069608	5.240696
7	ATR	-0.666939	3.825656
8	DISPARITY_INDEX	-2.552720	-0.992406
9	DISPARITY_INDEX	0.686412	2.380044
10	ACCUM_DIST_percent_away	-0.574444	0.457184
11	ACCUM_DIST_percent_away	0.614171	1.343039
12	ACCUM_DIST_percent_away	1.982200	2.666214
13	ACCUM_DIST_percent_away	3.367048	3.809976
14	ACCUM_DIST_percent_away	3.966963	4.437923
15	CP+_C_percent_away	-2.012827	-1.578939
16	CP+_C_percent_away	-0.110047	0.726091
17	CP+_C_percent_away	1.065066	1.892165
18	CP+_C_percent_away	2.185943	2.502320
19	CCI	-0.798821	1.024846
20	CCI	1.161991	1.351030
21	CP+_S3_binary	-0.320854	-0.202908
22	CP+_S3_binary	0.463383	0.775836

Loss Mitigation Analysis

	count	mean	std	min	25%	50%	75%	max
ACCUM_DIST	891.0	0.063917	9.238803e-01	-3.858756e+00	-4.200020e-16	-4.200020e-16	-4.200...	
ADX	891.0	0.352723	1.080255e+00	-1.467355e+00	-4.801315e-01	1.423905e-01	1.017062e...	
AROON DOWN	891.0	-0.135093	1.024984e+00	-1.402518e+00	-1.402518e+00	1.121756e-01	7.6...	
AROON UP	891.0	0.030412	1.003816e+00	-1.475225e+00	-1.025294e+00	5.489907e-01	7.737...	
ATR	891.0	-0.163947	9.950928e-01	-1.965443e+00	-1.014666e+00	-3.231913e-01	4.547176e...	
AWESOME	891.0	0.117514	1.199634e+00	-1.917871e+00	-1.075950e+00	2.320717e-01	1.302...	
CCI	891.0	-0.125522	1.105428e+00	-1.929347e+00	-1.314323e+00	-2.573079e-01	1.054337e...	
CHAIKIN	891.0	-0.022477	1.025049e+00	-5.499844e+00	-5.436894e-01	1.088141e-02	5.03994...	
CMO	891.0	-0.118417	8.988992e-01	-2.517524e+00	-8.529933e-01	-4.817050e-01	7.136240e...	
DISPARITY_INDEX	891.0	-0.094066	8.125651e-01	-1.936125e+00	-7.029335e-01	-8.633797e-02	5.3...	
DM_ADX_PLOT	891.0	0.352723	1.080255e+00	-1.467355e+00	-4.801315e-01	1.423905e-01	1.0...	
DM_DI_MINUS	891.0	-0.057041	9.978458e-01	-2.751897e+00	-7.355735e-01	-1.227316e-02	6.24...	
DM_DI_PLUS	891.0	-0.028666	9.712281e-01	-2.807351e+00	-6.424268e-01	-1.036852e-02	6.216...	
DYNAMIC_MOMENTUM	891.0	-0.052995	8.768612e-01	-3.506666e+00	-7.226890e-01	-9.556748e-02		
FISHER_TRANSFORM	891.0	-0.083636	1.050579e+00	-1.537346e+00	-1.328498e+00	-4.930431e-02		
LIN_REG_SLOPE	891.0	-0.053096	9.336813e-01	-2.073675e+00	-9.191278e-01	-1.494297e-01	9.7...	
MACD_AVG	891.0	0.104472	1.190258e+00	-2.200572e+00	-9.381956e-01	2.389401e-01	1.182...	
MACD_DEFAULT	891.0	0.098280	1.176312e+00	-2.281100e+00	-9.404748e-01	2.042963e-01	1.1...	
MACD_DIFF	891.0	-0.114101	1.198506e+00	-2.343214e+00	-1.208496e+00	-2.293962e-01	9.247...	
MFI	891.0	-0.012124	1.023687e+00	-2.617159e+00	-7.145281e-01	-6.881015e-02	7.399356e...	
MOMENTUM	891.0	-0.107411	8.584032e-01	-2.711072e+00	-6.013073e-01	-6.013073e-01	4.535...	
OBV	891.0	0.064631	9.283716e-01	-3.907453e+00	-2.268885e-16	-2.268885e-16	-2.268885e...	
PFE	891.0	0.091494	1.097131e+00	-1.924185e+00	-1.008066e+00	1.899370e-01	1.176527e...	
RIND	891.0	-0.148107	1.037276e+00	-2.033483e+00	-9.694674e-01	-1.243251e-01	6.156553e...	
RSI_AVERAGE	891.0	-0.009860	8.603600e-01	-2.801898e+00	-5.956918e-01	1.527672e-02	5.50...	
RSI_DEFAULT	891.0	-0.083030	8.044056e-01	-2.333340e+00	-6.223927e-01	-1.335505e-01	4.062...	
RSS	891.0	-0.029047	1.013291e+00	-2.622787e+00	-7.943942e-01	-5.334776e-02	7.014550e...	
RVI	891.0	0.103029	1.171801e+00	-2.288306e+00	-9.318078e-01	1.680130e-01	1.151812e...	
R_SQUARED	891.0	0.222407	9.742765e-01	-1.718198e+00	-4.711241e-01	6.074267e-01	1.079...	
STOCH_FAST_D	891.0	-0.102638	1.120682e+00	-1.977527e+00	-1.256080e+00	-1.668279e-01	9.	
STOCH_FAST_K	891.0	-0.139940	1.078975e+00	-1.649664e+00	-1.343114e+00	-4.595278e-01	9.	
TRIX_DEFAULT	891.0	-0.032898	1.388558e-17	-3.289758e-02	-3.289758e-02	-3.289758e-02	-3.28...	
TRIX_SIGNAL	891.0	0.023780	1.620234e+00	-3.049942e-02	-3.049942e-02	-3.049942e-02	-3.049...	
VOLUME	891.0	-0.041640	9.693109e-01	-5.887958e-01	-5.223562e-01	-4.268493e-01	-2.19830...	
VOLUME_DOWN	891.0	0.049074	1.118808e+00	-3.841527e-01	-3.841527e-01	-3.550689e-01	-1.1...	
VOLUME_UP	891.0	-0.094173	8.229634e-01	-3.863490e-01	-3.863490e-01	-3.863490e-01	-2.333...	
VORTEX_MINUS	891.0	-0.017014	9.328293e-01	-4.016403e+00	-6.346753e-01	8.998051e-02	8.1...	
VORTEX_PLUS	891.0	0.041921	9.381455e-01	-3.013467e+00	-7.614881e-01	-1.082850e-02	7.39...	
VROC	891.0	-0.074834	8.276113e-01	-6.507844e-01	-5.395453e-01	-3.686253e-01	7.457595e...	
WILLIAMS_%R	891.0	-0.139940	1.078974e+00	-1.649663e+00	-1.343113e+00	-4.595267e-01	9.4...	
144_SMA_percent_away	891.0	-0.035736	1.129122e+00	-3.619241e+00	-6.525986e-01	7.266080e-02		
500P_BOLL_LOWER_percent_away	891.0	-0.019663	1.068541e+00	-2.670985e+00	-6.923743e-01	-7.85050...		
500P_BOLL_UPPER_percent_away	891.0	-0.051544	1.114472e+00	-4.267434e+00	-5.927795e-01	2.678261...		
618_EMA_percent_away	891.0	-0.048562	1.072546e+00	-3.664322e+00	-6.690748e-01	6.338037e-02		
ACCUM_DIST_percent_away	891.0	-0.049800	1.004586e+00	-1.157283e+00	-6.954886e-01	-2.167982e-0...		
APZ_LOW_percent_away	891.0	-0.237508	1.443617e+00	-7.701517e+00	-7.500864e-01	-2.811074e-01		
APZ_UP_percent_away	891.0	-0.196027	1.458338e+00	-7.781405e+00	-6.964722e-01	-2.319297e-01	7...	
CP+_C_percent_away	891.0	-0.064793	1.007188e+00	-1.971912e+00	-1.050585e+00	1.082007e-01	6...	
CP+_R1_percent_away	891.0	-0.067228	1.003957e+00	-2.076107e+00	-1.037413e+00	1.179943e-01	...	
CP+_R2_percent_away	891.0	-0.069356	1.000225e+00	-2.172002e+00	-1.017860e+00	9.657202e-02	...	
CP+_R3_percent_away	891.0	-0.071113	9.960887e-01	-2.256838e+00	-9.866830e-01	8.465814e-02	6...	
CP+_R4_percent_away	891.0	-0.073636	9.827229e-01	-2.424276e+00	-8.561770e-01	4.330833e-02	6...	
CP+_R5_percent_away	891.0	-0.069710	9.661790e-01	-2.415271e+00	-6.173753e-01	-1.736439e-01	5...	
CP+_R6_percent_away	891.0	-0.058433	9.600595e-01	-2.141482e+00	-5.801514e-01	-1.342374e-01	2...	
CP+_S1_percent_away	891.0	-0.062136	1.009877e+00	-1.862347e+00	-1.056662e+00	6.803843e-02	...	
CP+_S2_percent_away	891.0	-0.059341	1.012023e+00	-1.839234e+00	-1.063640e+00	3.462352e-02	...	
CP+_S3_percent_away	891.0	-0.056473	1.013651e+00	-1.837317e+00	-1.066321e+00	2.110981e-02	...	
CP+_S4_percent_away	891.0	-0.048015	1.015997e+00	-1.798040e+00	-1.016017e+00	-7.943051e-02	...	
CP+_S5_percent_away	891.0	-0.036205	1.015036e+00	-1.687533e+00	-9.275450e-01	-1.888799e-01	8...	
CP+_S6_percent_away	891.0	-0.024778	1.010975e+00	-1.537768e+00	-1.009279e+00	-1.463564e-01	...	
LIN_REG_percent_away	891.0	-0.208658	1.416219e+00	-7.453477e+00	-7.012627e-01	-2.537719e-01		
LIN_REG_INTERCEPT_percent_away	891.0	-0.204170	1.344010e+00	-6.091900e+00	-9.885849e-01	-2.09054...		
MA_ENVELOPES_LOWER_percent_away	891.0	-0.218238	1.420855e+00	-7.096556e+00	-8.628659e-01	-3.79...		

Loss Mitigation Analysis

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MA_ENVELOPES_MID_percent_away	891.0	-0.218230	1.420946e+00	-7.098215e+00	-8.626462e-01	-3.7898	
MA_ENVELOPES_UPPER_percent_away	891.0	-0.218204	1.420854e+00	-7.096632e+00	-8.628910e-01	-3.783	
OBV_percent_away	891.0	-0.049261	1.001580e+00	-1.108437e+00	-6.931966e-01	-2.611862e-01	2.3
VROC_percent_away	891.0	0.048273	1.018328e+00	-9.713564e-15	-9.713564e-15	-9.713564e-15	-9.
VWAP_percent_away	891.0	-0.016305	9.937769e-01	-2.789857e+00	-4.933182e-01	2.103280e-01	5.
VWAP_CLOUD_HIGH_percent_away	891.0	-0.021259	9.871014e-01	-3.158506e+00	-3.866692e-01	4.62605	
VWAP_CLOUD_LOW_percent_away	891.0	-0.012475	1.007258e+00	-1.515101e+00	-4.849047e-01	-4.51699	
VWAP_L1_percent_away	891.0	0.008810	1.015801e+00	-2.611110e+00	-6.534476e-01	-1.033654e-01	
VWAP_U1_percent_away	891.0	-0.024801	9.827125e-01	-2.933863e+00	-3.387359e-01	1.568297e-01	
VWAP_U2_percent_away	891.0	-0.029255	9.773439e-01	-2.977965e+00	-3.537382e-01	1.592885e-01	
ZIGZAG_HIGH_percent_away	891.0	-0.277588	1.282495e+00	-5.937861e+00	-4.972689e-01	-1.861319e-0	
ZIGZAG_LOW_percent_away	891.0	0.080437	1.466338e+00	-6.051142e+00	-4.693406e-01	2.454414e-0	
ZLEMA_13_percent_away	891.0	-0.210403	1.465259e+00	-8.047752e+00	-6.243002e-01	-1.439191e-01	
ZLEMA_233_percent_away	891.0	-0.021122	1.120561e+00	-3.348054e+00	-6.913492e-01	7.015444e-02	
144_SMA_binary	891.0	0.025477	1.012797e+00	-1.012242e+00	-1.012242e+00	1.019863e+00	1.0
500P_BOLL_LOWER_binary	891.0	-0.003690	1.011292e+00	-1.603643e+00	-1.603643e+00	6.397779e-0	
500P_BOLL_UPPER_binary	891.0	0.084833	1.047517e+00	-5.845364e-01	-5.845364e-01	-5.845364e-01	
618_EMA_binary	891.0	-0.022773	1.003768e+00	-9.818034e-01	-9.818034e-01	-9.818034e-01	1.035
ACCUM_DIST_binary	891.0	-0.003978	1.007449e+00	-4.085756e-01	-4.085756e-01	-4.085756e-01	0.
APZ_LOW_binary	891.0	-0.148341	1.478491e+00	-8.338456e+00	1.564622e-01	1.564622e-01	1.56
APZ_UP_binary	891.0	-0.022943	9.558649e-01	-9.305861e-02	-9.305861e-02	-9.305861e-02	-9.305
CP+_C_binary	891.0	-0.063578	9.953704e-01	-8.922729e-01	-8.922729e-01	-8.922729e-01	1.1306
CP+_R1_binary	891.0	0.001099	1.003019e+00	-6.988134e-01	-6.988134e-01	-6.988134e-01	1.436
CP+_R2_binary	891.0	-0.038104	9.711956e-01	-5.156610e-01	-5.156610e-01	-5.156610e-01	-5.156
CP+_R3_binary	891.0	-0.036002	9.647849e-01	-4.209814e-01	-4.209814e-01	-4.209814e-01	-4.209
CP+_R4_binary	891.0	-0.051734	8.918936e-01	-2.346438e-01	-2.346438e-01	-2.346438e-01	-2.346
CP+_R5_binary	891.0	-0.007651	9.615331e-01	-9.912279e-02	-9.912279e-02	-9.912279e-02	-9.912
CP+_R6_binary	891.0	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.000000e+00	0.00
CP+_S1_binary	891.0	-0.104151	1.004944e+00	-1.091762e+00	-1.091762e+00	-1.091762e+00	9.17
CP+_S2_binary	891.0	-0.102289	1.014284e+00	-1.207635e+00	-1.207635e+00	8.314202e-01	8.31
CP+_S3_binary	891.0	-0.112740	1.021692e+00	-1.291322e+00	-1.291322e+00	7.758363e-01	7.75
CP+_S4_binary	891.0	-0.043591	1.019424e+00	-1.544737e+00	-1.544737e+00	6.479203e-01	6.47
CP+_S5_binary	891.0	0.010947	9.866972e-01	-3.244471e+00	3.116110e-01	3.116110e-01	3.116
CP+_S6_binary	891.0	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.000000e+00	0.00
LIN_REG_binary	891.0	-0.151507	1.056656e+00	-1.179694e+00	-1.179694e+00	-4.475876e-01	1.01
LIN_REG_INTERCEPT_binary	891.0	-0.106368	1.026751e+00	-1.058908e+00	-1.058908e+00	-9.337209e-	
MA_ENVELOPES_LOWER_binary	891.0	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.00000	
MA_ENVELOPES_MID_binary	891.0	-0.163293	1.064536e+00	-1.157237e+00	-1.157237e+00	-1.076460e	
MA_ENVELOPES_UPPER_binary	891.0	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.000000	
OBV_binary	891.0	-0.010504	9.988443e-01	-4.120212e-01	-4.120212e-01	-4.120212e-01	-4.87991
VROC_binary	891.0	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.000000e+00	0.000
VWAP_binary	891.0	-0.036876	9.960384e-01	-8.269965e-01	-8.269965e-01	-8.269965e-01	1.2244
VWAP_CLOUD_HIGH_binary	891.0	-0.017174	9.993859e-01	-5.120033e-01	-5.120033e-01	-5.120033e-0	
VWAP_CLOUD_LOW_binary	891.0	-0.013489	1.006731e+00	-1.581553e+00	-1.444912e+00	6.989358e-	
VWAP_L1_binary	891.0	-0.033512	1.031209e+00	-2.246854e+00	-7.946543e-01	6.575457e-01	6.57
VWAP_U1_binary	891.0	0.043610	1.044491e+00	-4.790301e-01	-4.790301e-01	-4.790301e-01	-4.79
VWAP_U2_binary	891.0	0.048490	1.120773e+00	-2.113771e-01	-2.113771e-01	-2.113771e-01	-2.11
ZIGZAG_HIGH_binary	891.0	0.070440	1.179440e+00	-2.360314e-01	-2.360314e-01	-2.360314e-01	-2.
ZIGZAG_LOW_binary	891.0	-0.181386	1.300693e+00	-4.508998e+00	2.761920e-01	2.761920e-01	2
ZLEMA_13_binary	891.0	-0.125468	1.077198e+00	-1.216330e+00	-1.216330e+00	-4.656908e-01	1.0
ZLEMA_233_binary	891.0	0.034821	1.011015e+00	-1.089866e+00	-1.089866e+00	9.624623e-01	9.6
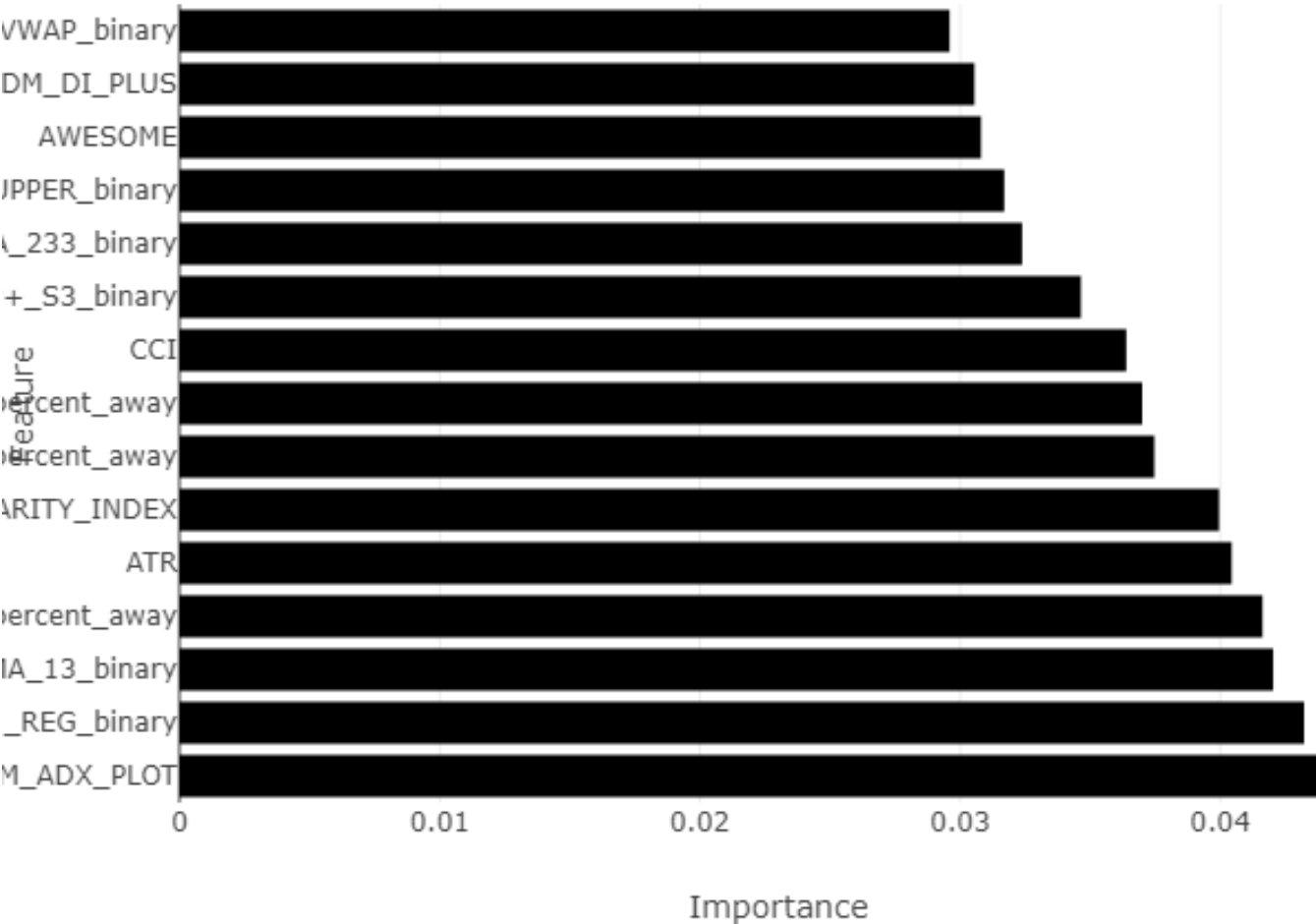
Feature Importance

Optimal Win Ranges for DM_ADX_PLOT (, Neural Network)
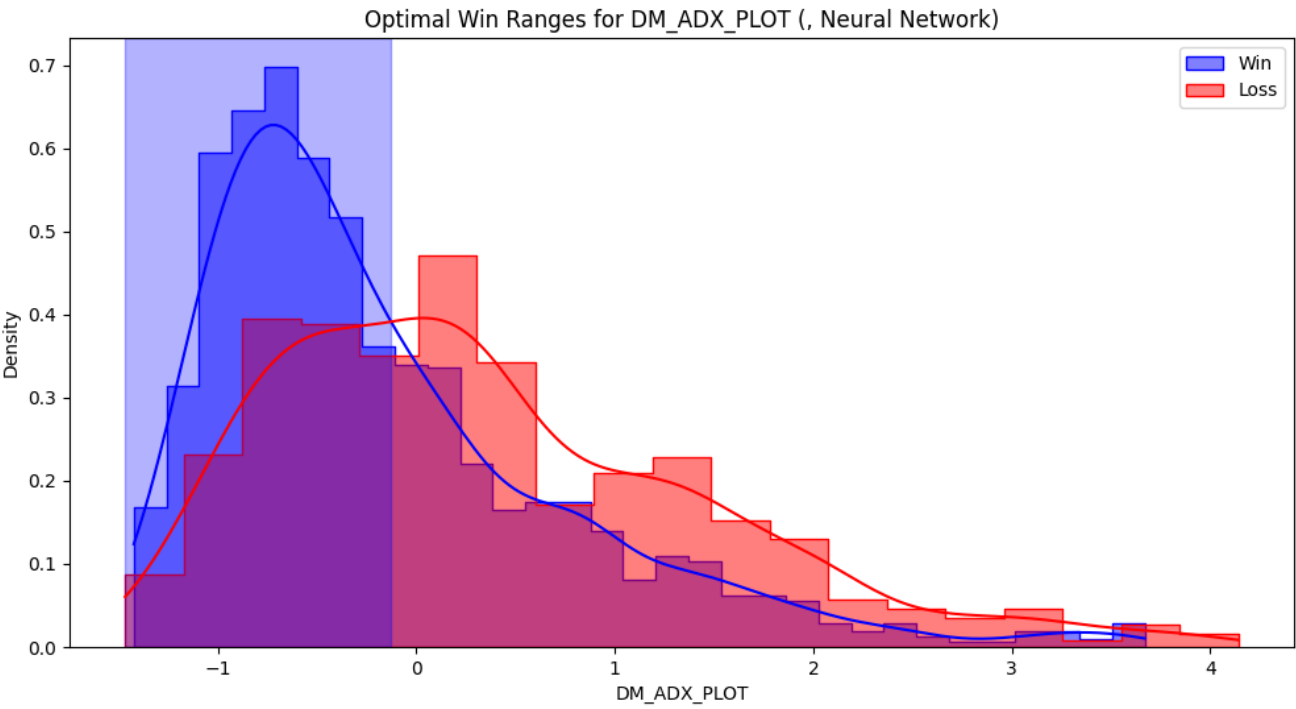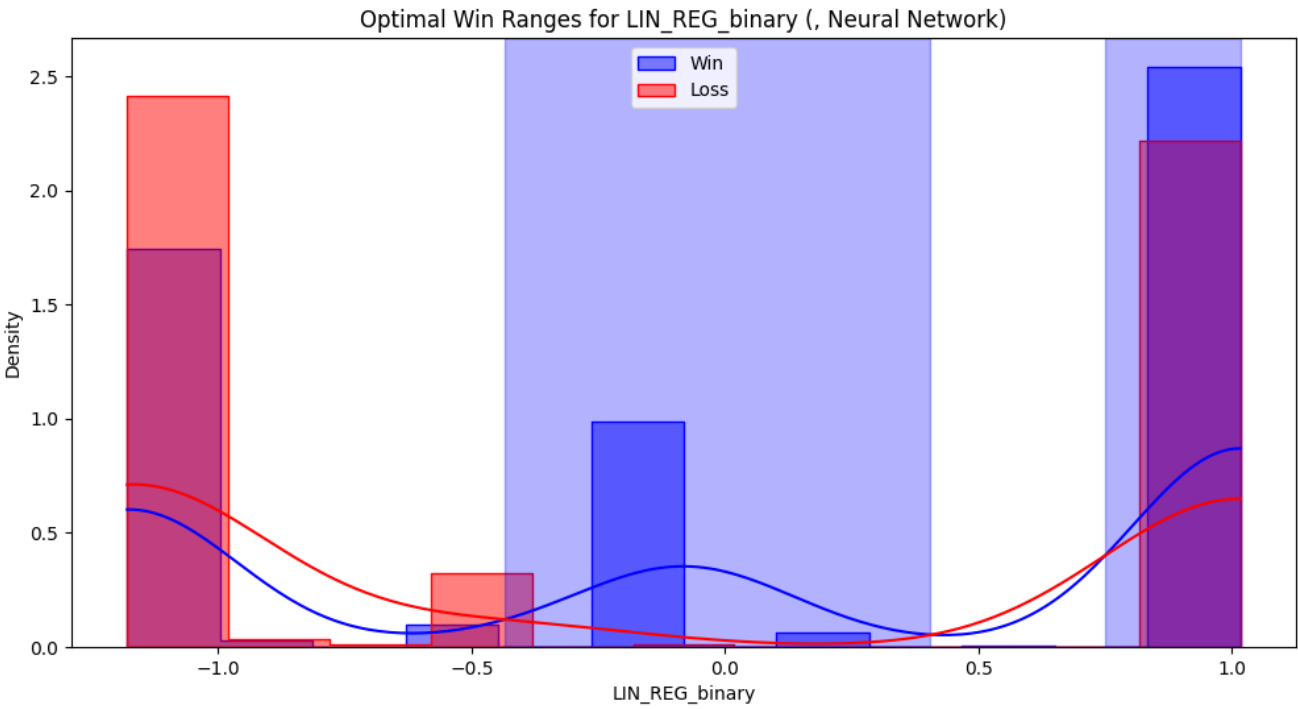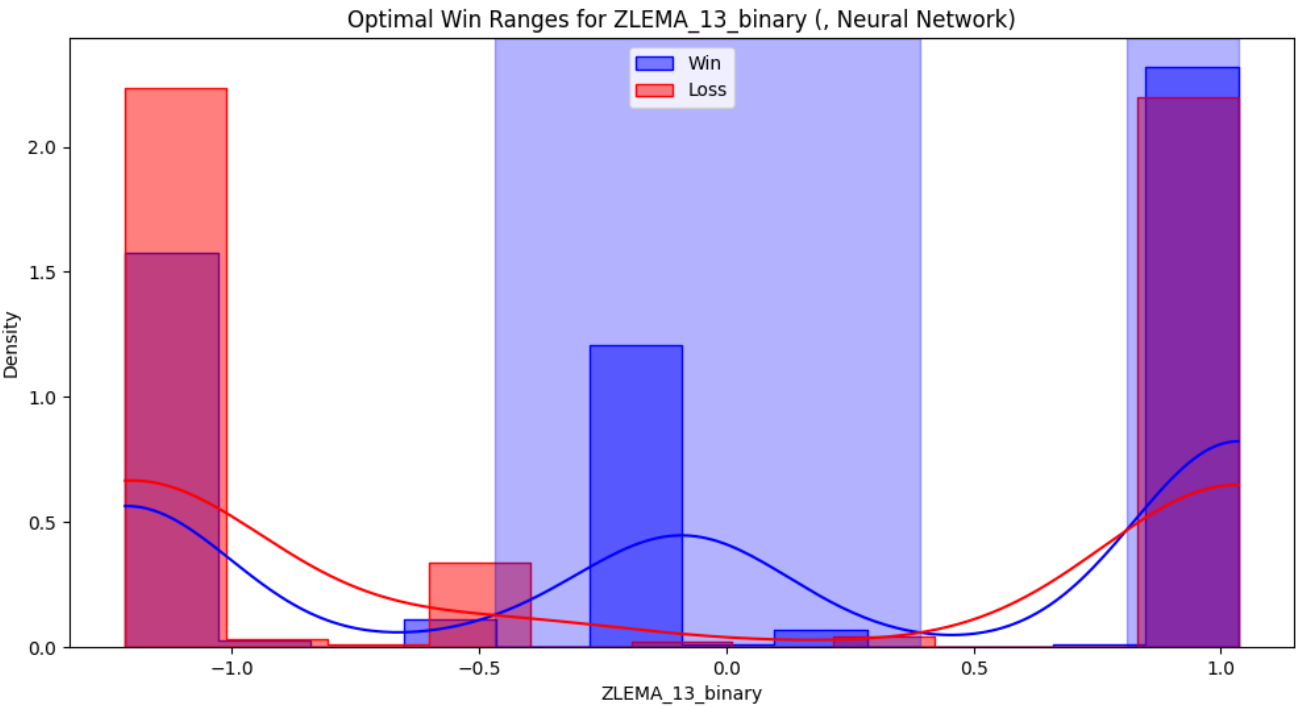

Optimal Win Ranges for DM_ADX_PLOT (, Neural Network)
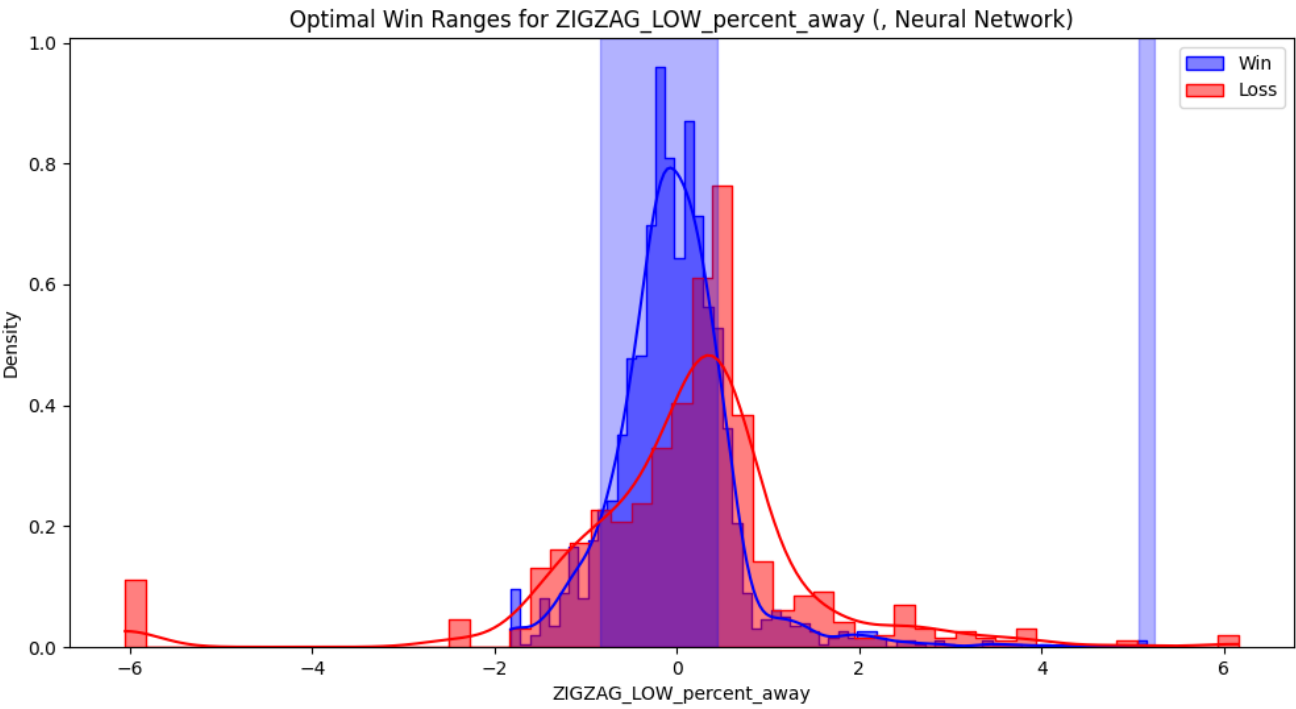
Optimal Win Ranges for LIN_REG_binary (, Neural Network)

Optimal Win Ranges for LIN_REG_binary (, Neural Network)

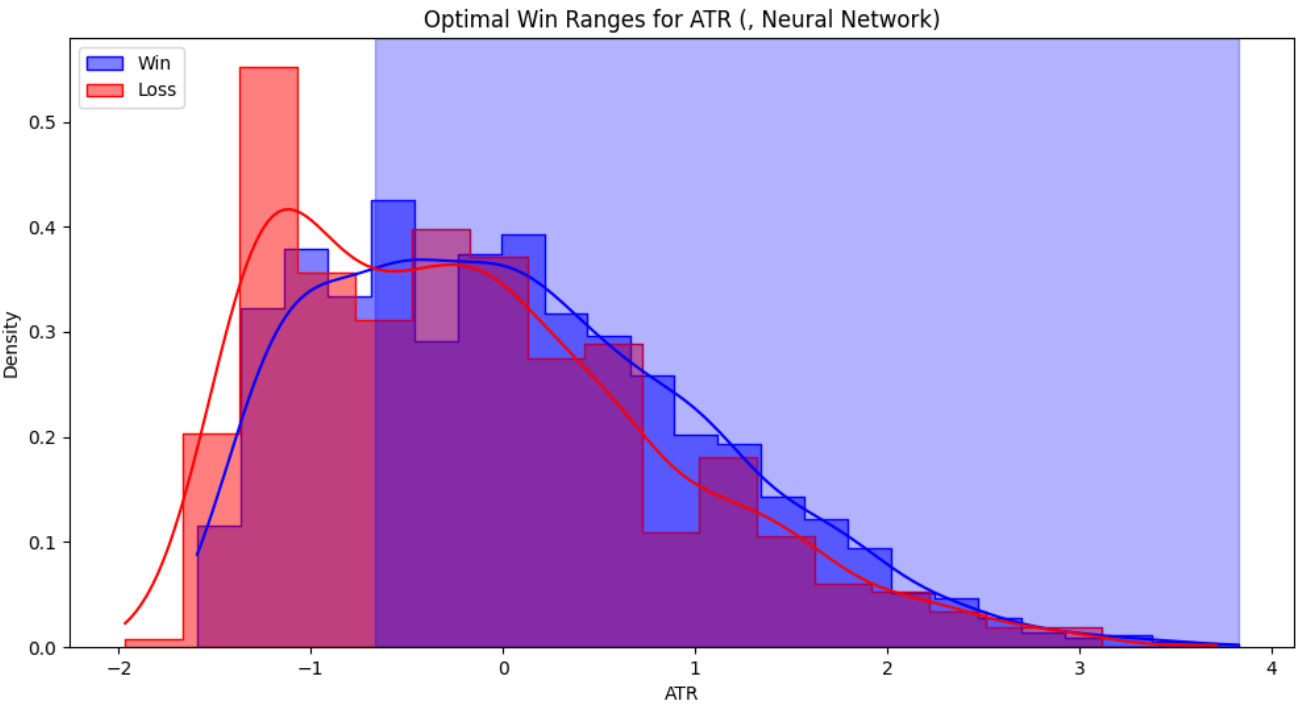# Optimal Win Ranges for ZLEMA_13_binary (, Neural Network)

Optimal Win Ranges for ZLEMA_13_binary (, Neural Network)

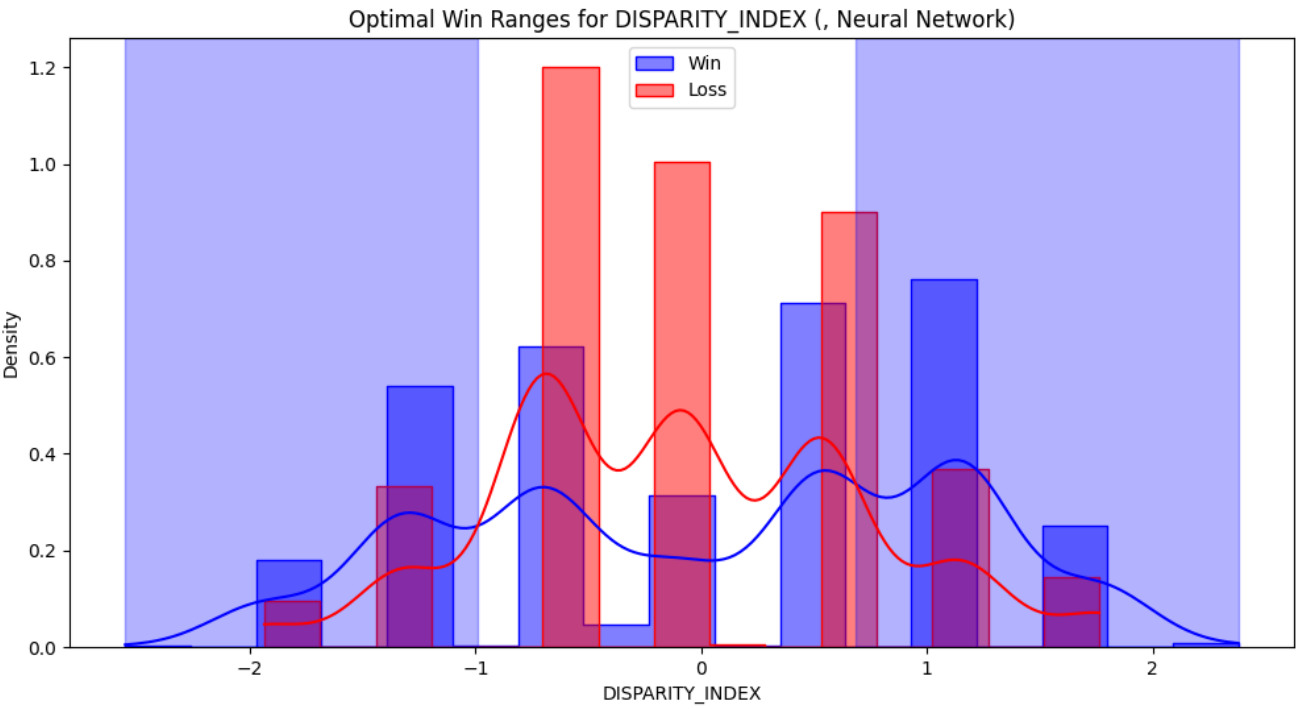# Optimal Win Ranges for ZIGZAG_LOW_percent_away (, Neural Network)

Optimal Win Ranges for ZIGZAG_LOW_percent_away (, Neural Network)

Optimal Win Ranges for ATR (, Neural Network)
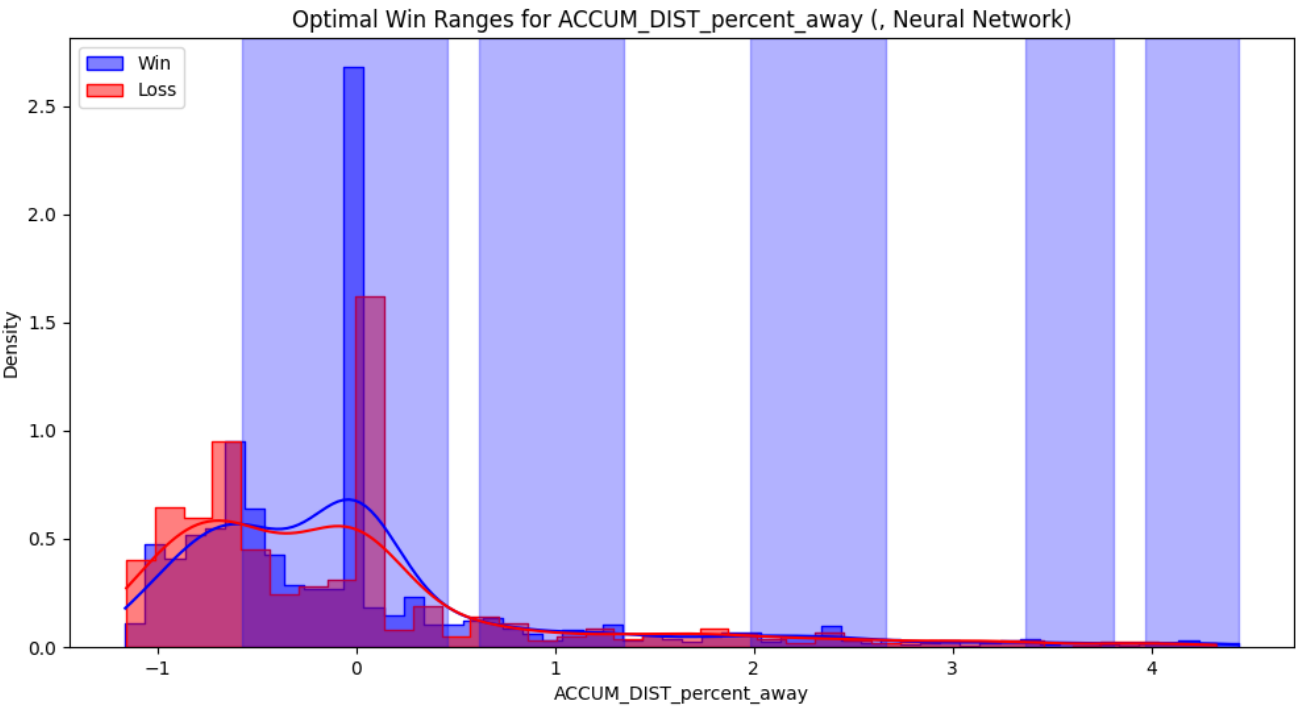
Optimal Win Ranges for DISPARITY_INDEX (, Neural Network)

Optimal Win Ranges for DISPARITY_INDEX (, Neural Network)

Optimal Win Ranges for ACCUM_DIST_percent_away (, Neural Network)

Optimal Win Ranges for ACCUM_DIST_percent_away (, Neural Network)

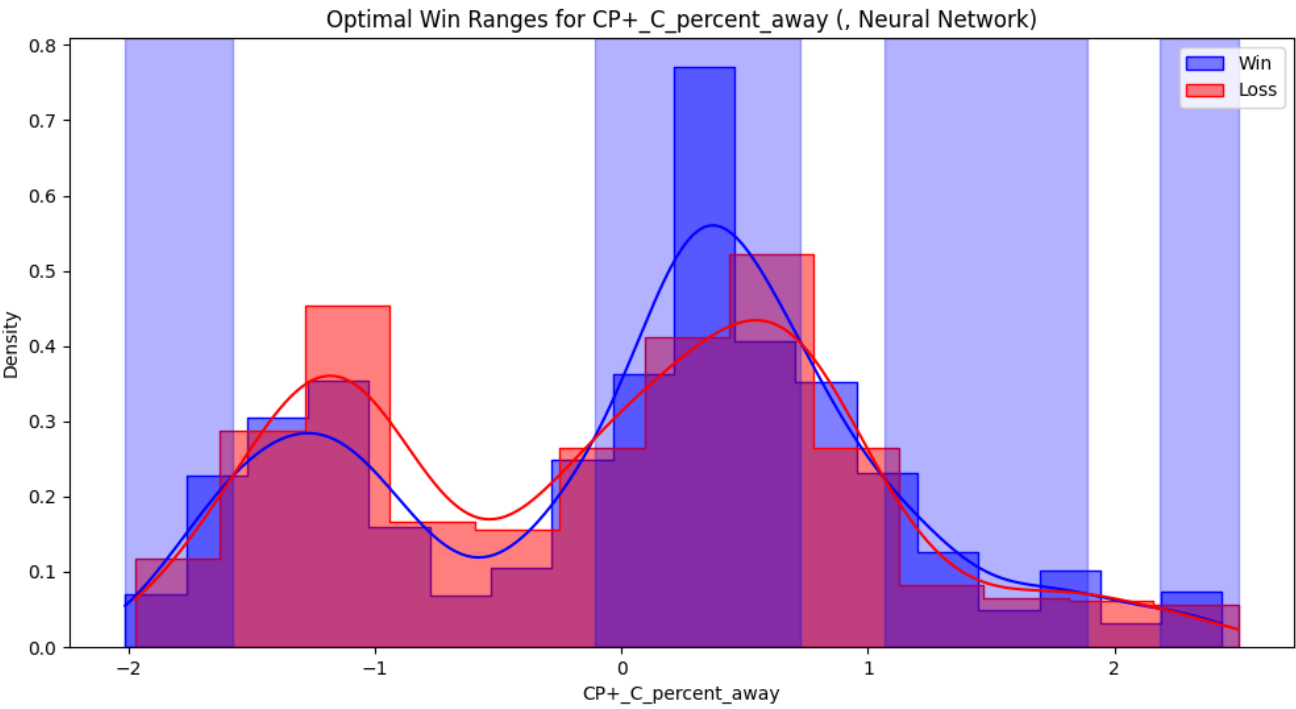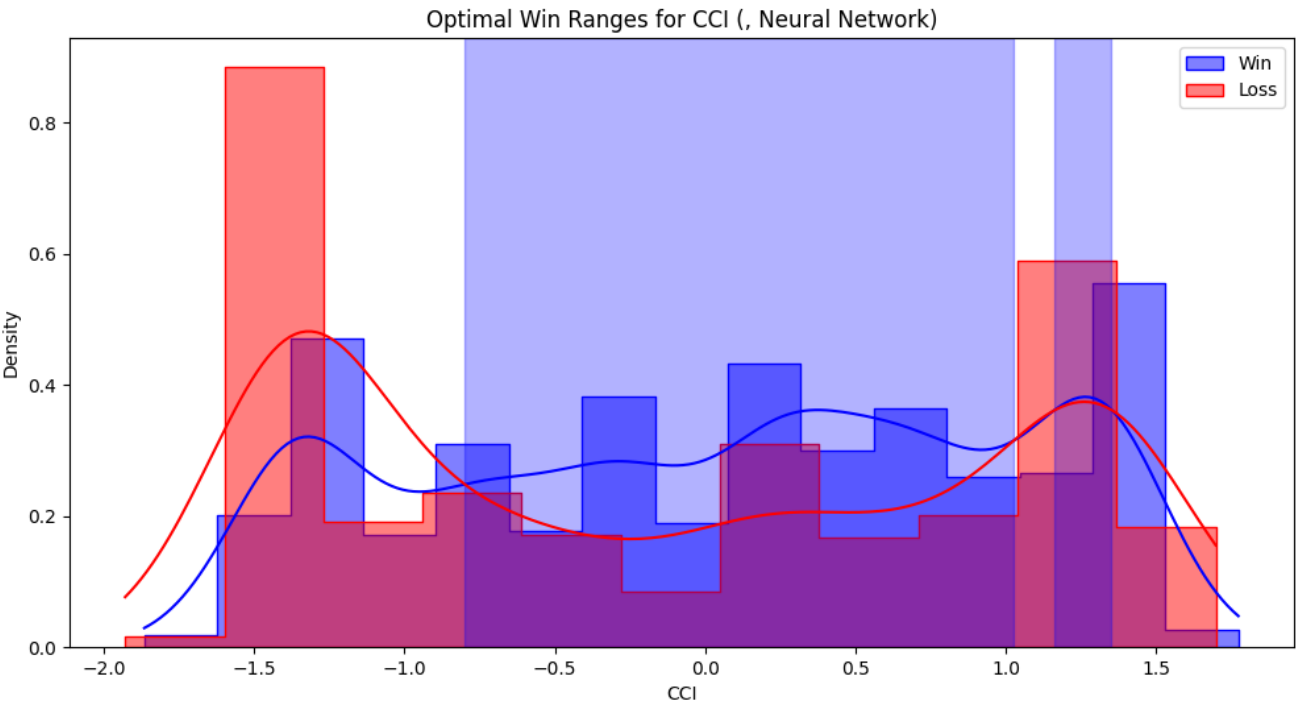# Optimal Win Ranges for CP+_C_percent_away (, Neural Network)

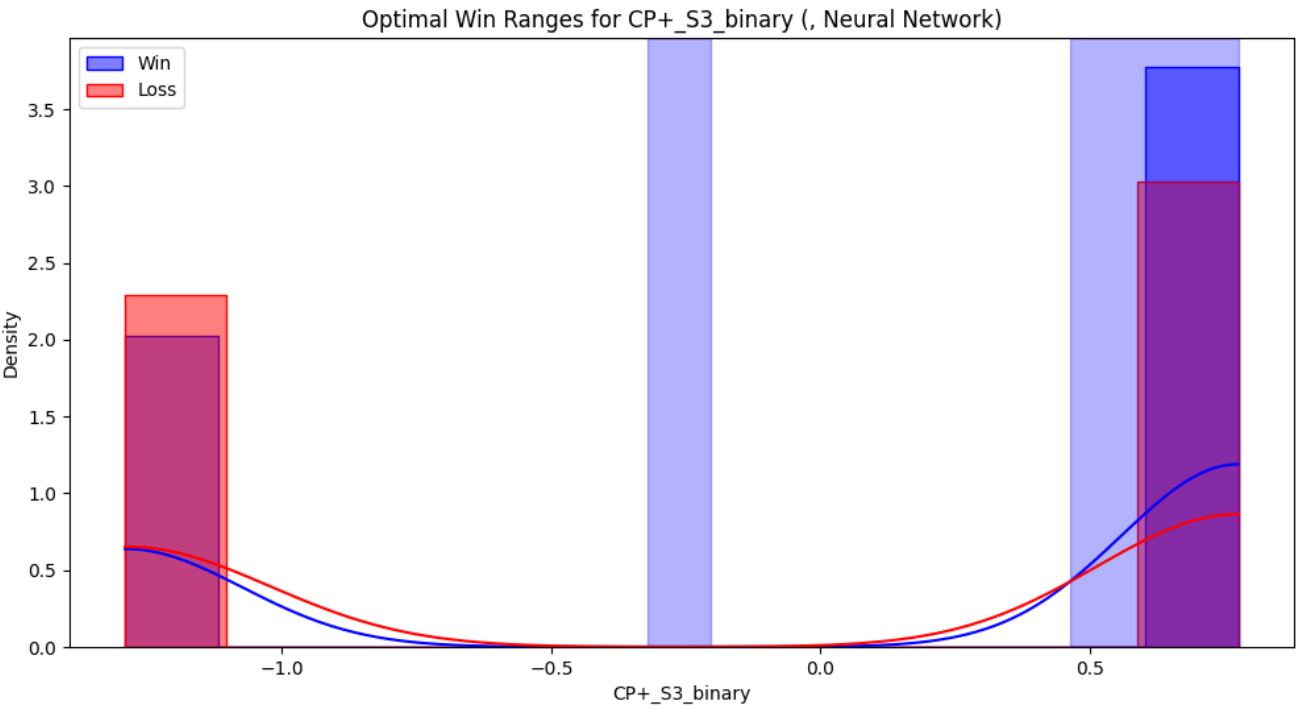

Optimal Win Ranges for CP+_C_percent_away (, Neural Network)
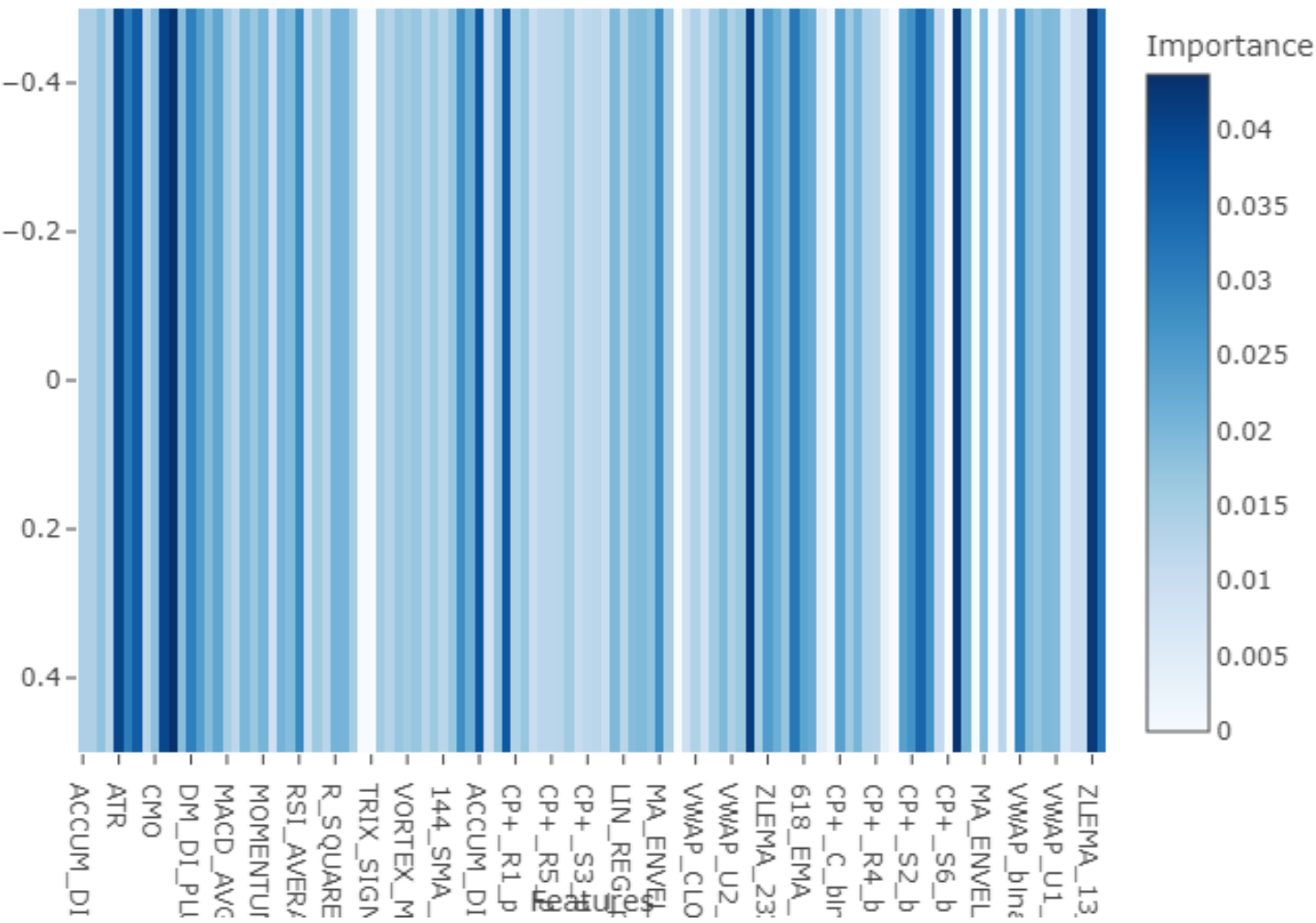
Optimal Win Ranges for CCI (, Neural Network)
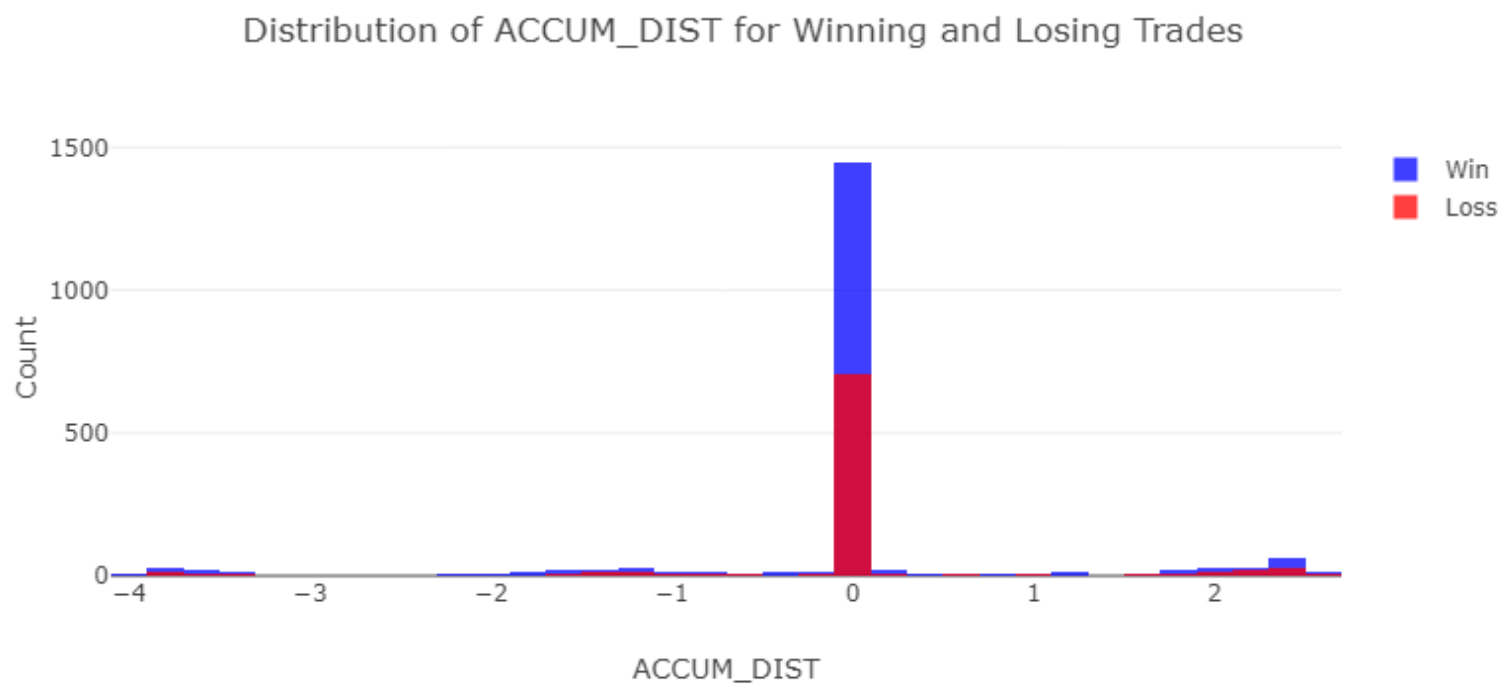

Optimal Win Ranges for CCI (, Neural Network)

Optimal Win Ranges for CP+_S3_binary (, Neural Network)

Feature Importance Heatmap

Correlation Matrix of Top Indicators

	ATR	DISPARITY_INDEX	CCI	AWESOME	CMO	AROON DOWN	ADX	ACCUM_DIST	AROON UP	CHAIKIN
ATR	1	0.06810582	0.03593402	−210.5451µ	0.04647065	0.0994008	−0.2092915	−0.05166683	0.1080883	−0.009701042
RITY_INDEX	0.06810582	1	0.6227089	−0.172729	0.4809793	0.4262158	−0.02465797	−0.01210974	−0.3984268	0.2858266
CCI	0.03593402	0.6227089	1	−0.7922516	0.5151498	0.7056156	−0.0259828	0.01561708	−0.7055818	0.423679
AWESOME	−210.5451µ	−0.172729	−0.7922516	1	−0.3602913	−0.6169719	0.01797664	−0.007298964	0.6338808	−0.3602087
CMO	0.04647065	0.4809793	0.5151498	−0.3602913	1	0.0933044	−0.01946268	−0.01246087	−0.08286094	0.1741902
OON DOWN	0.0994008	0.4262158	0.7056156	−0.6169719	0.0933044	1	−0.083044	−0.02018344	−0.6673593	0.3629066
ADX	−0.2092915	−0.02465797	−0.0259828	0.01797664	−0.01946268	−0.083044	1	0.0220906	−0.05661242	−0.01547867
CCUM_DIST	−0.05166683	−0.01210974	0.01561708	−0.007298964	−0.01246087	−0.02018344	0.0220906	1	−0.01029536	0.01462511
AROON UP	0.1080883	−0.3984268	−0.7055818	0.6338808	−0.08286094	−0.6673593	−0.05661242	−0.01029536	1	−0.3502396
CHAIKIN	−0.009701042	0.2858266	0.423679	−0.3602087	0.1741902	0.3629066	−0.01547867	0.01462511	−0.3502396	1

Distribution of ACCUM_DIST for Winning and Losing Trades

Distribution of ACCUM_DIST for Winning and Losing Trades

KDE Plot with Optimal Win Ranges for ACCUM_DIST
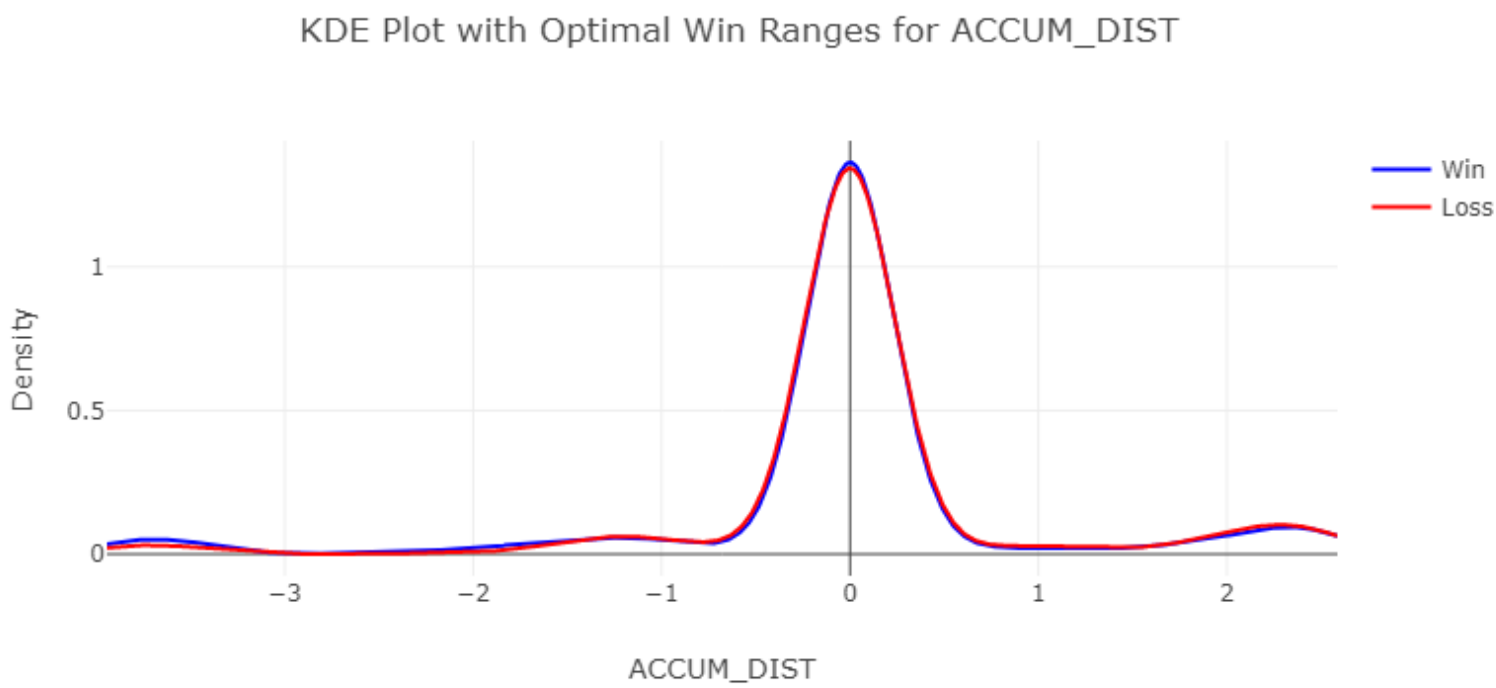
Mean Indicator Values for Losses