

Classification Report				
	precision	recall	f1-score	support
0	0.54	0.57	0.55	122
1	0.42	0.40	0.41	98
accuracy			0.49	220
macro avg	0.48	0.48	0.48	220
weighted avg	0.49	0.49	0.49	220

Accuracy
Accuracy: 0.4909090909090909

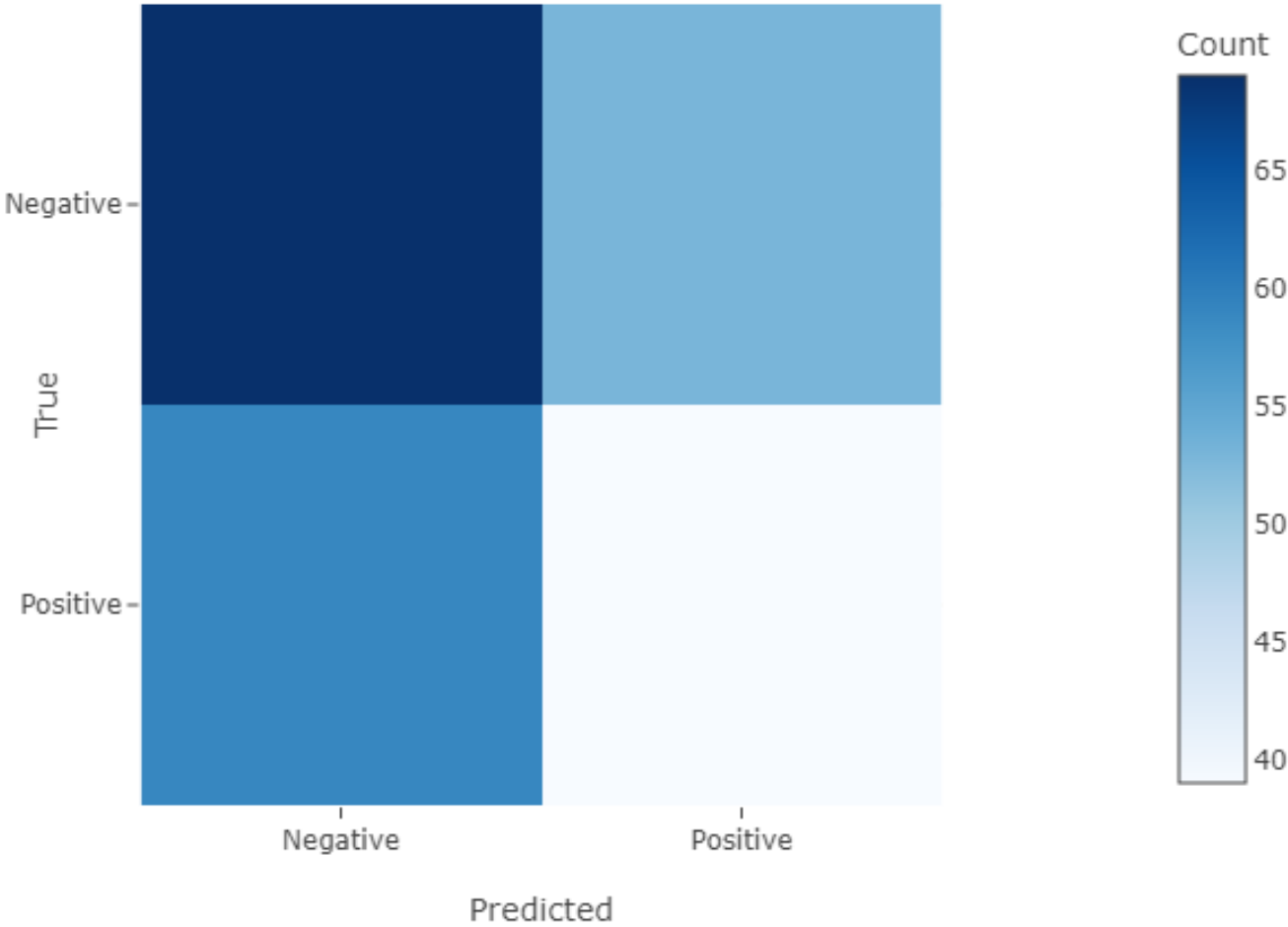
Optimal Win Ranges Summary			
	feature	optimal_win_range_start	optimal_win_range_end
0	ADX	-1.103844	-0.477453
1	ADX	-0.139693	0.818317
2	ADX	1.125371	2.482552
3	AROON DOWN	-0.630738	-0.016466
4	AROON DOWN	0.891442	2.396746
5	AROON UP	-2.529763	-0.871769
6	AROON UP	-0.334424	0.139289
7	ATR	-1.491491	-0.695662
8	ATR	0.498083	1.076868
9	ATR	1.626714	3.666932
10	AWESOME	-1.958855	-0.740519
11	AWESOME	-0.298308	0.522941
12	CCI	-1.466263	-0.846203
13	CCI	0.010791	0.741756
14	CCI	1.286199	2.047411
15	CHAIKIN	-4.097105	-1.492705
16	CHAIKIN	-1.355632	-0.135676
17	CHAIKIN	1.605159	3.812045
18	CMO	-2.515216	-0.428949
19	CMO	1.636456	2.481394
20	DISPARITY_INDEX	-1.936822	-1.249019
21	DISPARITY_INDEX	-0.848842	-0.479930
22	DISPARITY_INDEX	0.064060	0.476742
23	DISPARITY_INDEX	0.801885	1.564722
24	DM_ADX_PLOT	-1.103844	-0.477453
25	DM_ADX_PLOT	-0.139693	0.818317
26	DM_ADX_PLOT	1.125371	2.482552

Loss Mitigation Analysis

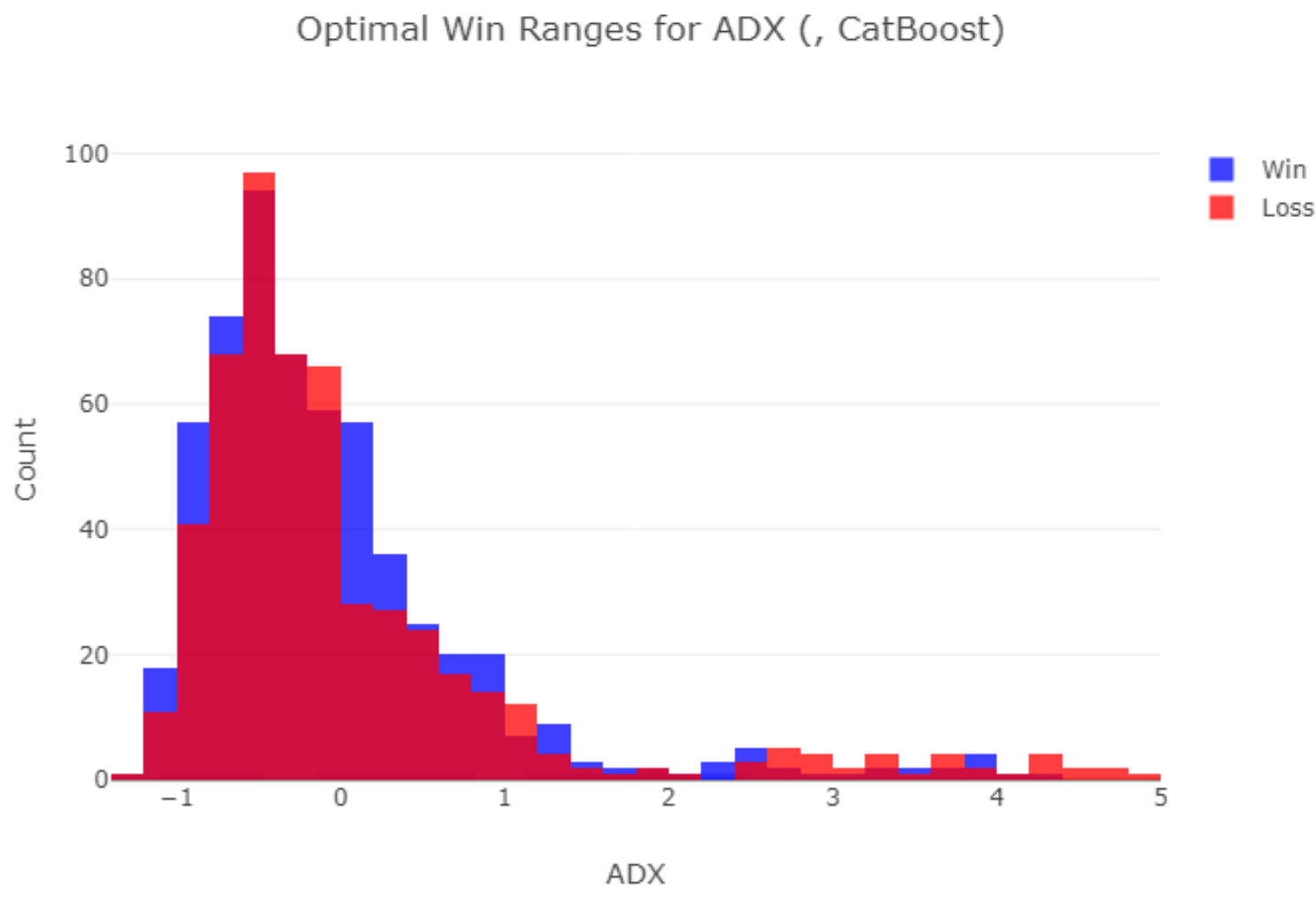
	count	mean	std	min	25%	50%	75%	max
ADX	519.0	0.050207	1.102537	-1.300359e+00	-5.836247e-01	-2.960232e-01	2.795924e-01	8.404177e-01
AROON_DOWN	519.0	-0.025067	0.988170	-9.750002e-01	-9.750002e-01	-1.968771e-01	8.404177e-01	8.404177e-01
AROON_UP	519.0	0.048243	0.961221	-2.529763e+00	2.450408e-01	4.971994e-01	4.971994e-01	4.971994e-01
ATR	519.0	-0.021088	0.989429	-2.967394e+00	-7.142612e-01	-9.977054e-02	6.025045e-01	6.025045e-01
AWESOME	519.0	0.023714	1.011175	-2.522899e+00	-5.652758e-01	-8.258065e-05	6.336181e-01	6.336181e-01
CCI	519.0	-0.006605	1.009473	-1.955254e+00	-1.002677e+00	-1.430411e-01	7.308380e-01	7.308380e-01
CHAIKIN	519.0	0.003999	1.045252	-7.469117e+00	-3.256318e-01	1.317977e-01	4.077193e-01	4.077193e-01
CMO	519.0	0.039368	0.985227	-2.650823e+00	-6.908394e-01	-1.648854e-02	6.570537e-01	6.570537e-01
DISPARITY_INDEX	519.0	0.012683	1.029725	-2.424537e+00	-6.398215e-01	2.525361e-01	2.525361e-01	2.525361e-01
DM_ADX_PLOT	519.0	0.050207	1.102537	-1.300359e+00	-5.836247e-01	-2.960232e-01	2.795924e-01	8.404177e-01
DM_DI_MINUS	519.0	-0.042488	1.021084	-3.181025e+00	-6.022680e-01	4.501028e-02	6.172091e-01	6.172091e-01
DM_DI_PLUS	519.0	0.025463	1.040987	-3.428033e+00	-6.137158e-01	-1.824323e-02	6.764731e-01	6.764731e-01
DYNAMIC_MOMENTUM	519.0	0.006191	1.013629	-1.342304e+00	-8.820801e-01	1.090253e-01	1.090253e-01	1.090253e-01
FISHER_TRANSFORM	519.0	0.022392	1.014788	-2.428263e+00	-1.006639e+00	1.677460e-01	1.677460e-01	1.677460e-01
LIN_REG_SLOPE	519.0	0.028825	1.006049	-2.388261e+00	-1.123786e+00	-2.597279e-01	9.830711e-01	9.830711e-01
MACD_AVG	519.0	0.011953	1.011684	-2.463441e+00	-6.707324e-01	9.380799e-03	5.691601e-01	5.691601e-01
MACD_DEFAULT	519.0	0.012869	1.014948	-2.418966e+00	-6.408845e-01	-3.092020e-02	5.691601e-01	5.691601e-01
MACD_DIFF	519.0	-0.008747	1.000811	-2.095056e+00	-7.028151e-01	-1.169398e-01	7.272241e-01	7.272241e-01
MFI	519.0	0.092006	1.002361	-2.410603e+00	-6.577771e-01	1.125880e-01	8.222717e-01	8.222717e-01
MOMENTUM	519.0	0.043404	0.966016	-3.435090e+00	-3.271072e-01	1.168903e-01	5.608841e-01	5.608841e-01
PFE	519.0	0.022506	1.005431	-2.435360e+00	-5.285676e-01	2.016932e-01	5.262536e-01	5.262536e-01
RIND	519.0	-0.018288	0.977202	-1.401491e+00	-7.597845e-01	-3.185242e-01	6.707156e-01	6.707156e-01
RSI_AVERAGE	519.0	0.012255	1.028327	-1.811083e+00	-6.816188e-01	-2.028101e-01	5.370111e-01	5.370111e-01
RSI_DEFAULT	519.0	0.022087	1.032960	-1.795899e+00	-6.204616e-01	-1.119393e-01	8.300711e-01	8.300711e-01
RSS	519.0	0.016666	0.989047	-4.792159e+00	-5.625098e-01	8.903767e-02	6.864856e-01	6.864856e-01
RVI	519.0	0.011001	1.021750	-2.496300e+00	-6.733139e-01	4.085737e-02	5.609479e-01	5.609479e-01
R_SQUARED	519.0	0.000201	0.992668	-2.161233e+00	-8.207832e-01	2.515765e-01	1.100511e-01	1.100511e-01
STOCH_FAST_D	519.0	-0.027256	0.988641	-1.457680e+00	-6.422925e-01	-2.398738e-01	5.760111e-01	5.760111e-01
STOCH_FAST_K	519.0	-0.000168	1.019995	-2.111148e+00	-7.287767e-01	3.957629e-02	8.360111e-01	8.360111e-01
TRIX_DEFAULT	519.0	0.044055	1.081288	-2.508622e-01	-2.508622e-01	-2.508622e-01	-2.508622e-01	-2.508622e-01
TRIX_SIGNAL	519.0	0.042840	1.079781	-4.414297e+00	-2.387479e-01	-2.387479e-01	-2.387479e-01	-2.387479e-01
VOLUME	519.0	-0.051153	0.958031	-5.772758e-01	-5.365999e-01	-4.633832e-01	-1.088246e-01	-1.088246e-01
VOLUME_DOWN	519.0	-0.051153	0.958031	-5.772758e-01	-5.365999e-01	-4.633832e-01	-1.088246e-01	-1.088246e-01
VOLUME_UP	519.0	0.000000	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.000000e+00	0.000000e+00
VORTEX_MINUS	519.0	-0.001079	1.009812	-3.170790e+00	-7.953148e-01	-2.014460e-01	3.920111e-01	3.920111e-01
VORTEX_PLUS	519.0	0.017819	0.989620	-3.005169e+00	-7.064172e-01	2.130835e-01	6.728111e-01	6.728111e-01
VROC	519.0	-0.000683	1.016312	-7.479597e-01	-6.283425e-01	-3.710378e-01	2.048720e-01	2.048720e-01
WILLIAMS_%R	519.0	-0.000168	1.019997	-2.111152e+00	-7.287735e-01	3.958357e-02	8.367111e-01	8.367111e-01
1000_SMA_percent_away	519.0	-0.031188	1.026108	-2.658925e+00	-7.188174e-01	-1.674576e-02	6.025045e-01	6.025045e-01
144_SMA_percent_away	519.0	0.000167	1.055427	-3.640062e+00	-7.762678e-01	-4.825179e-02	6.025045e-01	6.025045e-01
14_P_MA_ENVELOPES_LOWER_percent_away	519.0	0.015819	1.078132	-1.030632e+01	-7.605997e-01	-8.25179e-02	6.025045e-01	6.025045e-01
14_P_MA_ENVELOPES_MID_percent_away	519.0	0.015823	1.078107	-1.030506e+01	-7.614786e-01	-4.611179e-02	6.025045e-01	6.025045e-01
14_P_MA_ENVELOPES_UPPER_percent_away	519.0	0.015894	1.078173	-1.030722e+01	-7.620584e-01	-7.401179e-02	6.025045e-01	6.025045e-01
236_EMA_percent_away	519.0	-0.014582	1.054022	-3.237817e+00	-6.943256e-01	-2.851122e-02	6.025045e-01	6.025045e-01
382_EMA_percent_away	519.0	-0.020361	1.046772	-3.292389e+00	-7.163878e-01	-2.356824e-02	6.025045e-01	6.025045e-01
618_EMA_percent_away	519.0	-0.023928	1.039040	-2.949323e+00	-6.883537e-01	-5.873677e-03	6.025045e-01	6.025045e-01
62_ZLEMA_percent_away	519.0	0.011045	1.039921	-4.339719e+00	-7.817056e-01	1.490741e-01	8.025045e-01	8.025045e-01
8_ZLEMA_percent_away	519.0	0.017576	1.022453	-5.775749e+00	-6.550347e-01	1.877232e-01	8.025045e-01	8.025045e-01
ACCUM_DIST_percent_away	519.0	0.028407	0.976634	-1.648087e+00	-1.054554e+00	2.032439e-01	8.025045e-01	8.025045e-01
APZ_LOW_percent_away	519.0	0.019620	1.165531	-1.520714e+01	-5.247602e-01	-8.365246e-02	5.025045e-01	5.025045e-01
APZ_UPPER_percent_away	519.0	-0.000004	1.145690	-1.247629e+01	-5.065265e-01	9.432796e-03	5.025045e-01	5.025045e-01
BOLLI_500_P_LOWER_percent_away	519.0	-0.012195	1.036672	-2.317786e+00	-7.882211e-01	-1.502274e-01	5.025045e-01	5.025045e-01
BOLLI_500_P_MID_percent_away	519.0	-0.017831	1.031365	-3.538163e+00	-7.134009e-01	2.693896e-01	5.025045e-01	5.025045e-01
BOLLI_500_P_UPPER_percent_away	519.0	-0.021912	1.023375	-4.443134e+00	-5.904578e-01	1.630520e-01	5.025045e-01	5.025045e-01
CP+_C_percent_away	519.0	-0.000050	1.032295	-2.934605e+00	-5.236507e-01	1.806413e-02	5.302545e-01	5.302545e-01
CP+_R1_percent_away	519.0	0.004026	1.035411	-2.884883e+00	-5.486237e-01	3.884438e-02	5.102545e-01	5.102545e-01
CP+_R2_percent_away	519.0	0.008144	1.037935	-2.834954e+00	-5.468014e-01	5.216149e-02	5.802545e-01	5.802545e-01
CP+_R3_percent_away	519.0	0.012217	1.039755	-2.823692e+00	-5.884343e-01	8.193059e-02	6.002545e-01	6.002545e-01
CP+_R4_percent_away	519.0	0.023426	1.040688	-2.878152e+00	-6.850631e-01	9.988870e-02	7.102545e-01	7.102545e-01
CP+_R5_percent_away	519.0	0.036294	1.032086	-2.832033e+00	-7.336998e-01	6.026349e-02	8.502545e-01	8.502545e-01
CP+_R6_percent_away	519.0	0.044624	1.017609	-2.550141e+00	-6.526626e-01	-1.574535e-02	9.102545e-01	9.102545e-01
CP+_S1_percent_away	519.0	-0.004010	1.028737	-2.964606e+00	-5.258892e-01	2.137780e-02	5.002545e-01	5.002545e-01
CP+_S2_percent_away	519.0	-0.007792	1.024905	-2.976215e+00	-5.539166e-01	1.860125e-02	5.302545e-01	5.302545e-01

Loss Mitigation Analysis							
CP+ _S3_percent_away	519.0	-0.011345	1.020959	-2.971678e+00	-5.984247e-01	7.659270e-03	5.5
CP+ _S4_percent_away	519.0	-0.020422	1.009678	-2.886730e+00	-6.730799e-01	-5.012887e-02	6.2
CP+ _S5_percent_away	519.0	-0.030451	0.996130	-2.646028e+00	-8.030522e-01	-1.634381e-01	7.4
CP+ _S6_percent_away	519.0	-0.037886	0.986472	-2.325417e+00	-8.879416e-01	-2.112412e-01	7.4
LIN_REG_percent_away	519.0	-0.026485	1.079874	-1.031727e+01	-7.273308e-01	3.633127e-02	6.5
LIN_REG_INTERCEPT_percent_away	519.0	0.026288	1.021505	-4.575680e+00	-9.378040e-01	-2.020967	
OBV_percent_away	519.0	0.029418	0.976085	-1.660427e+00	-1.066399e+00	2.338904e-01	5.41
VROC_percent_away	519.0	0.035706	0.813441	5.171408e-16	5.171408e-16	5.171408e-16	5.17
VWAP_percent_away	519.0	-0.021232	1.056430	-3.547590e+00	-5.113772e-01	9.971414e-02	5.2
VWAP_CLOUD_HIGH_percent_away	519.0	-0.044370	1.055709	-4.591398e+00	-3.465760e-01	5.073040	
VWAP_CLOUD_LOW_percent_away	519.0	0.021340	1.057713	-8.945391e-01	-5.267866e-01	-5.004314	
VWAP_L1_percent_away	519.0	-0.010464	1.063732	-2.700486e+00	-5.943085e-01	-1.972127e-01	4
VWAP_L2_percent_away	519.0	0.000889	1.061927	-1.695210e+00	-7.577268e-01	-2.729157e-01	3
VWAP_U1_percent_away	519.0	-0.027679	1.045906	-4.256298e+00	-4.434716e-01	2.865124e-01	5
VWAP_U2_percent_away	519.0	-0.030442	1.038516	-4.479888e+00	-3.636414e-01	3.254565e-01	6
ZIGZAG_HIGH_percent_away	519.0	0.001163	1.106294	-1.202656e+01	-6.029491e-01	-7.192187e-02	
ZIGZAG_LOW_percent_away	519.0	0.048518	1.097549	-1.707336e+00	-4.646908e-01	-2.835452e-01	
1000_SMA_binary	519.0	-0.016334	1.000338	-1.001370e+00	-1.001370e+00	-1.001370e+00	9.99
144_SMA_binary	519.0	0.014915	1.004080	-7.932032e-01	-7.932032e-01	-7.932032e-01	1.2613
14_P_MA_ENVELOPES_LOWER_binary	519.0	0.000000	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.0000
14_P_MA_ENVELOPES_MID_binary	519.0	0.038619	1.260341	-6.332923e-02	-6.332923e-02	-6.332923e-02	
14_P_MA_ENVELOPES_UPPER_binary	519.0	0.000000	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.0000
236_EMA_binary	519.0	-0.024830	0.996789	-8.704268e-01	-8.704268e-01	-8.704268e-01	1.1496
382_EMA_binary	519.0	-0.040701	0.997700	-9.528261e-01	-9.528261e-01	-9.528261e-01	1.0503
618_EMA_binary	519.0	-0.027244	0.999568	-9.813304e-01	-9.813304e-01	-9.813304e-01	1.0199
62_ZLEMA_binary	519.0	0.026491	1.020494	-4.650529e-01	-4.650529e-01	-4.650529e-01	-4.650
8_ZLEMA_binary	519.0	0.010281	1.005538	-6.586606e-01	-6.586606e-01	-6.586606e-01	1.5214
ACCUM_DIST_binary	519.0	0.000000	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.0
APZ_LOW_binary	519.0	-0.050638	1.452911	-2.644837e+01	4.554755e-02	4.554755e-02	4.554
APZ_UPPER_binary	519.0	0.033597	1.453851	-3.021989e-02	-3.021989e-02	-3.021989e-02	-3.02
BOLLI_500_P_LOWER_binary	519.0	-0.044185	1.019123	-1.522182e+00	-1.522182e+00	6.579966e-01	
BOLLI_500_P_MID_binary	519.0	-0.028864	0.999650	-9.867188e-01	-9.867188e-01	-9.867188e-01	1.
BOLLI_500_P_UPPER_binary	519.0	0.022264	1.014178	-5.700797e-01	-5.700797e-01	-5.700797e-01	
CP+ _C_binary	519.0	0.014954	1.001781	-9.087938e-01	-9.087938e-01	-9.087938e-01	1.10137
CP+ _R1_binary	519.0	0.051232	1.016420	-7.164426e-01	-7.164426e-01	-7.164426e-01	1.39720
CP+ _R2_binary	519.0	0.027183	1.015128	-5.854283e-01	-5.854283e-01	-5.854283e-01	1.71020
CP+ _R3_binary	519.0	0.052618	1.037998	-4.989129e-01	-4.989129e-01	-4.989129e-01	-4.9891
CP+ _R4_binary	519.0	0.053089	1.072140	-3.231373e-01	-3.231373e-01	-3.231373e-01	-3.2313
CP+ _R5_binary	519.0	-0.002777	0.988349	-1.095614e-01	-1.095614e-01	-1.095614e-01	-1.0956
CP+ _R6_binary	519.0	0.000000	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.0000
CP+ _S1_binary	519.0	-0.022255	1.004187	-1.178027e+00	-1.178027e+00	8.491634e-01	8.4916
CP+ _S2_binary	519.0	-0.023408	1.008808	-1.406507e+00	-1.406507e+00	7.109814e-01	7.1098
CP+ _S3_binary	519.0	-0.021891	1.010229	-1.566745e+00	-1.566745e+00	6.389743e-01	6.3897
CP+ _S4_binary	519.0	-0.006205	1.006088	-2.129637e+00	4.695636e-01	4.695636e-01	4.6956
CP+ _S5_binary	519.0	0.003934	0.994203	-3.689625e+00	2.710302e-01	2.710302e-01	2.7103
CP+ _S6_binary	519.0	-0.056371	1.325073	-1.347838e+01	7.419291e-02	7.419291e-02	7.4192
LIN_REG_binary	519.0	-0.006559	0.681718	-4.482760e-02	-4.482760e-02	-4.482760e-02	-4.4827
LIN_REG_INTERCEPT_binary	519.0	0.029769	1.040271	-3.174868e-01	-3.174868e-01	-3.174868e-01	
OBV_binary	519.0	0.000000	0.000000	0.000000e+00	0.000000e+00	0.000000e+00	0.00000
VROC_binary	519.0	0.038121	0.868446	3.075137e-15	3.075137e-15	3.075137e-15	3.07513
VWAP_binary	519.0	0.006948	1.001970	-8.542371e-01	-8.542371e-01	-8.542371e-01	1.17277
VWAP_CLOUD_HIGH_binary	519.0	0.040374	1.029348	-5.062162e-01	-5.062162e-01	-5.062162e-01	
VWAP_CLOUD_LOW_binary	519.0	0.028226	0.989514	-1.485410e+00	-1.485410e+00	6.753126e-01	
VWAP_L1_binary	519.0	-0.050936	1.016767	-1.408667e+00	-1.408667e+00	7.106181e-01	7.106
VWAP_L2_binary	519.0	-0.071595	1.088314	-2.990159e+00	3.352740e-01	3.352740e-01	3.352
VWAP_U1_binary	519.0	0.037214	1.030730	-4.619486e-01	-4.619486e-01	-4.619486e-01	-4.619
VWAP_U2_binary	519.0	-0.009894	0.971565	-1.854458e-01	-1.854458e-01	-1.854458e-01	-1.854
ZIGZAG_HIGH_binary	519.0	0.033597	1.453851	-3.021989e-02	-3.021989e-02	-3.021989e-02	-3.02
ZIGZAG_LOW_binary	519.0	-0.002879	1.022875	-7.498495e+00	1.410592e-01	1.410592e-01	1.4

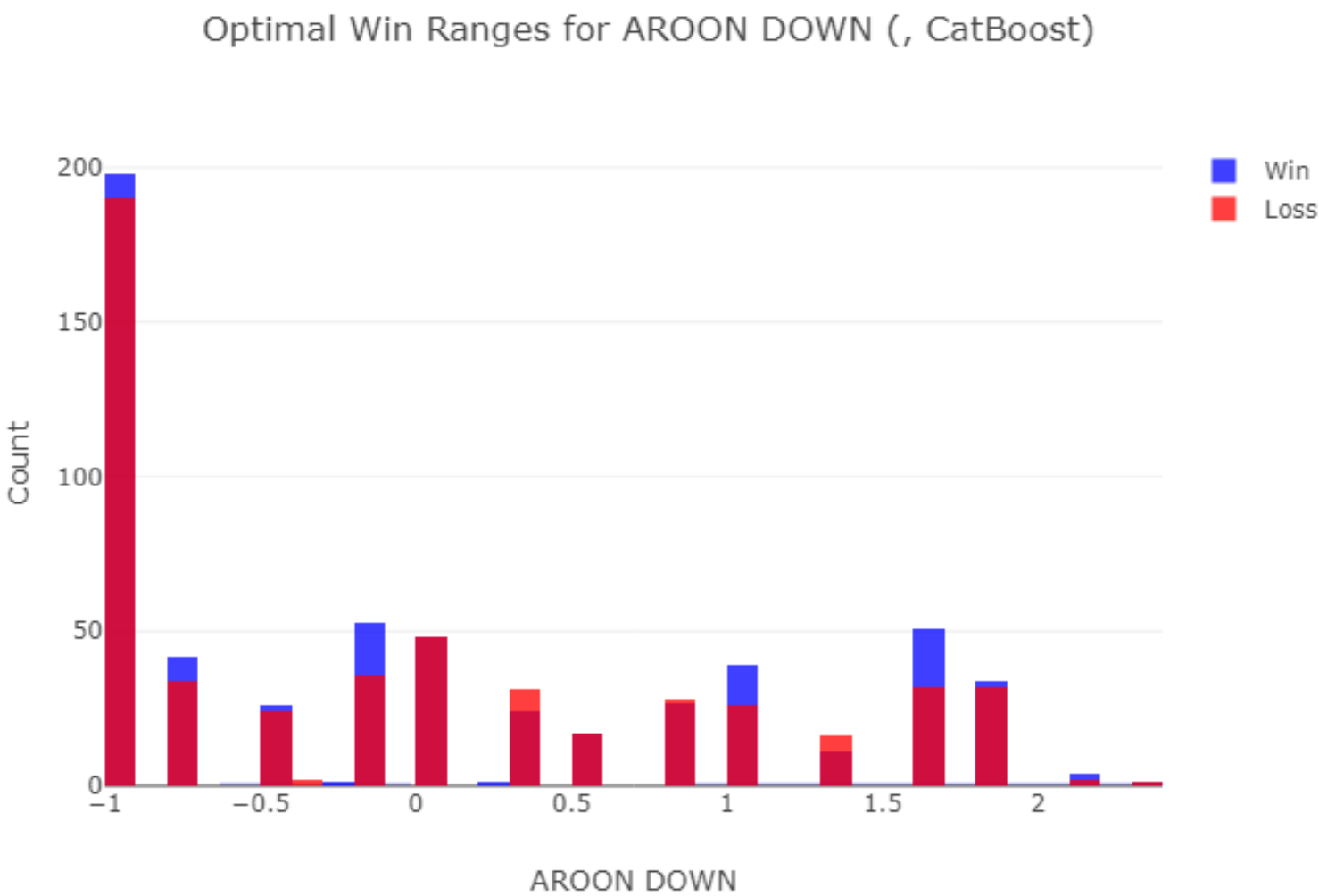
Confusion Matrix

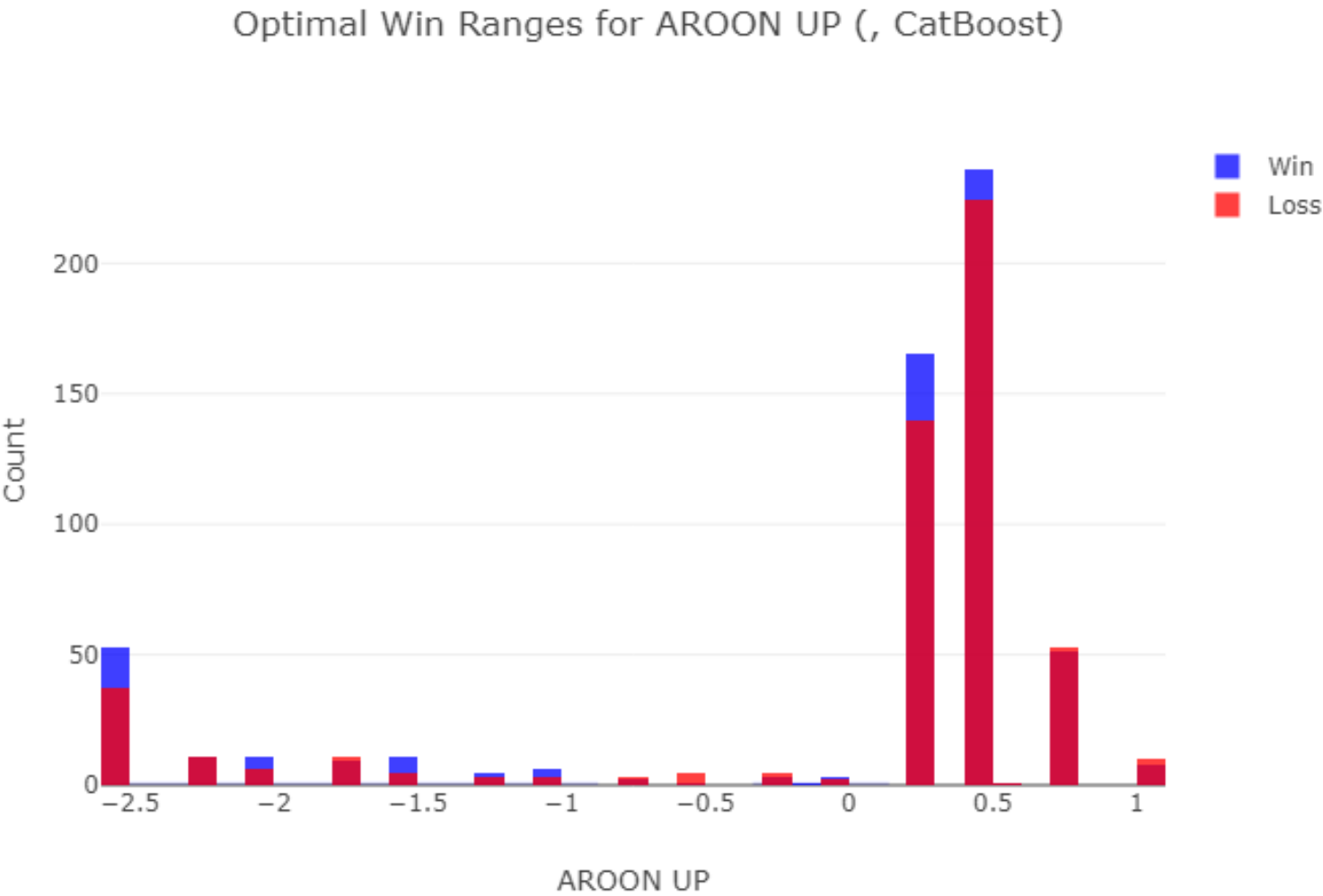


Optimal Win Ranges for ADX (, CatBoost)

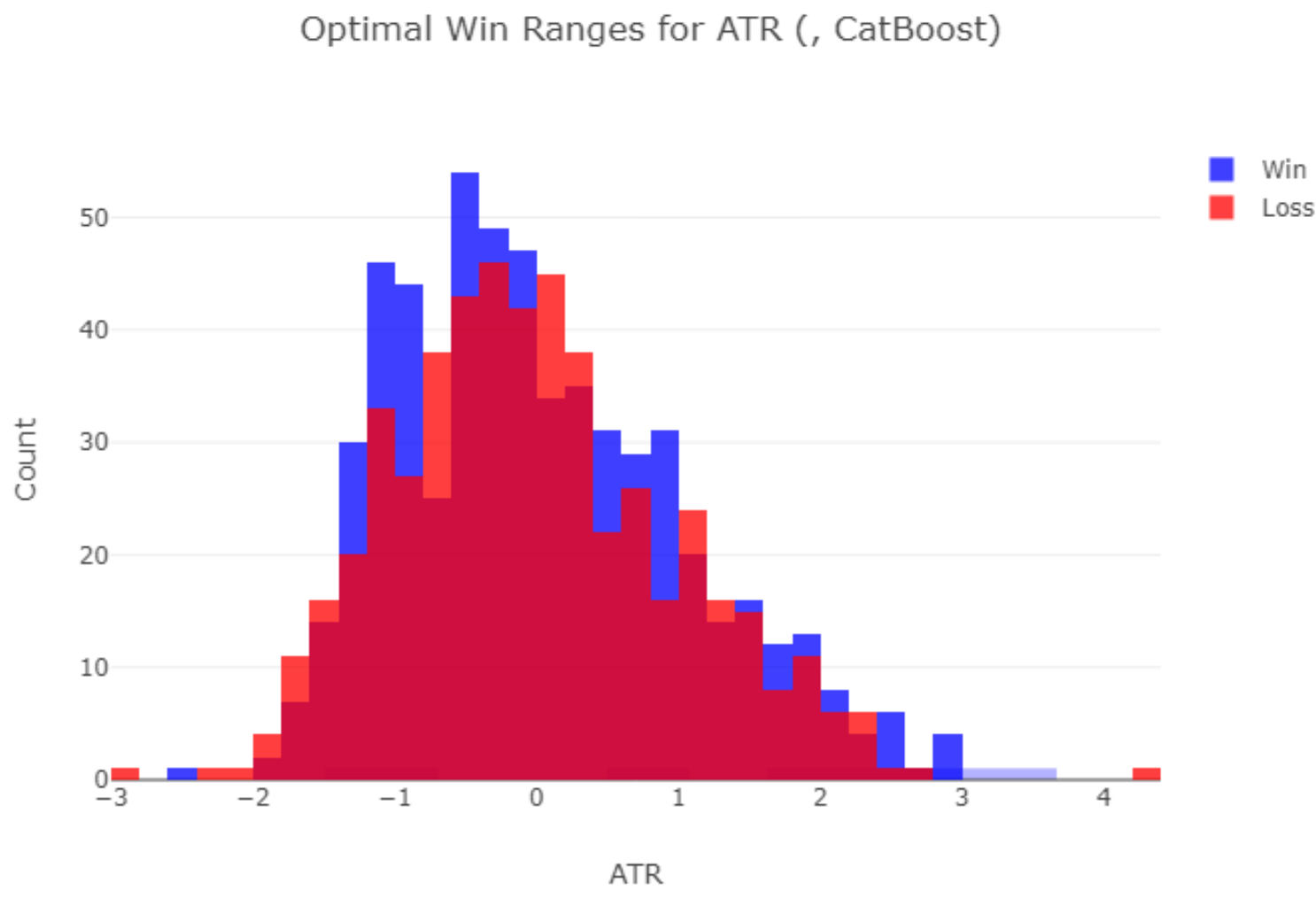


Optimal Win Ranges for AROON DOWN (, CatBoost)

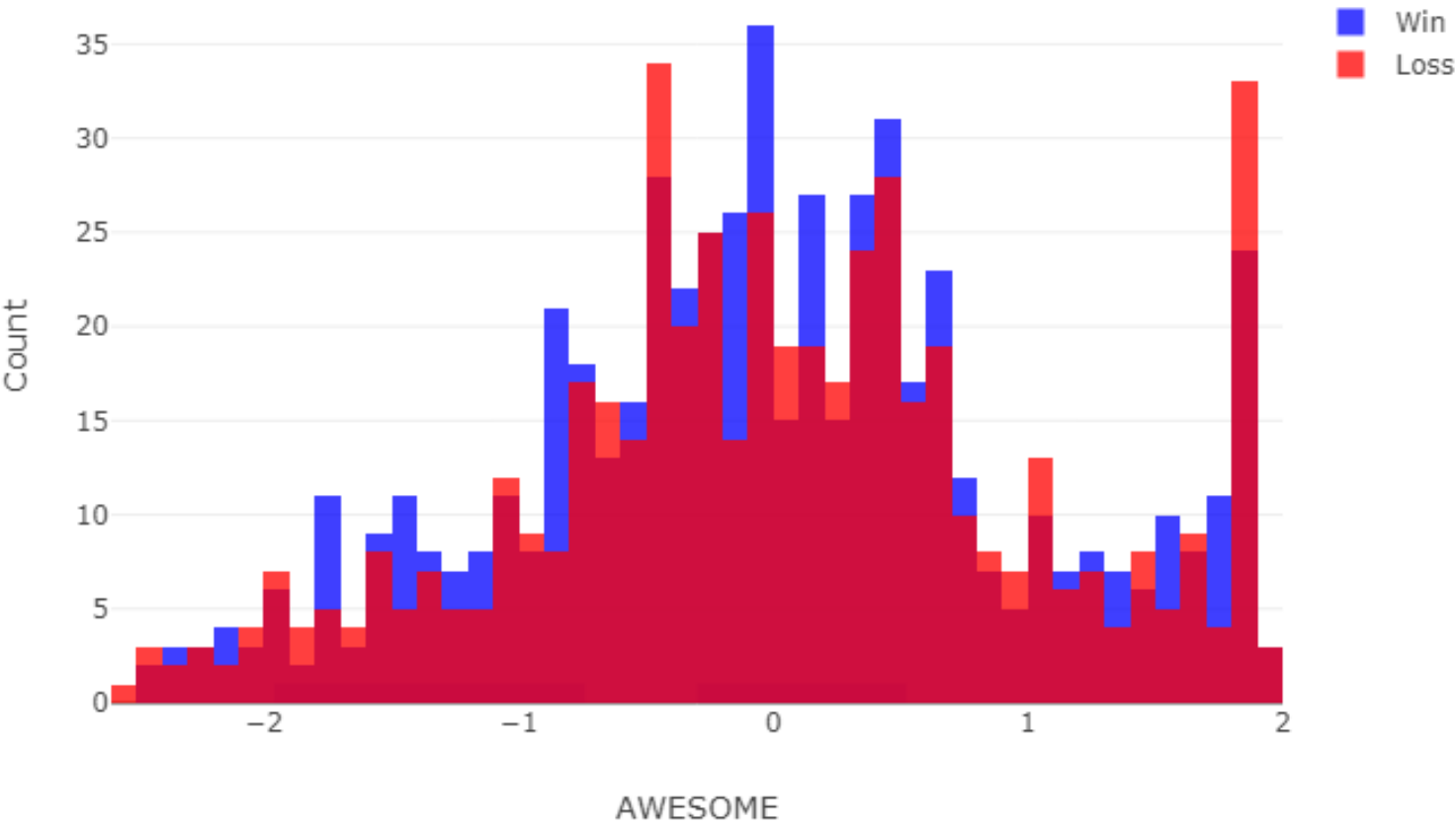




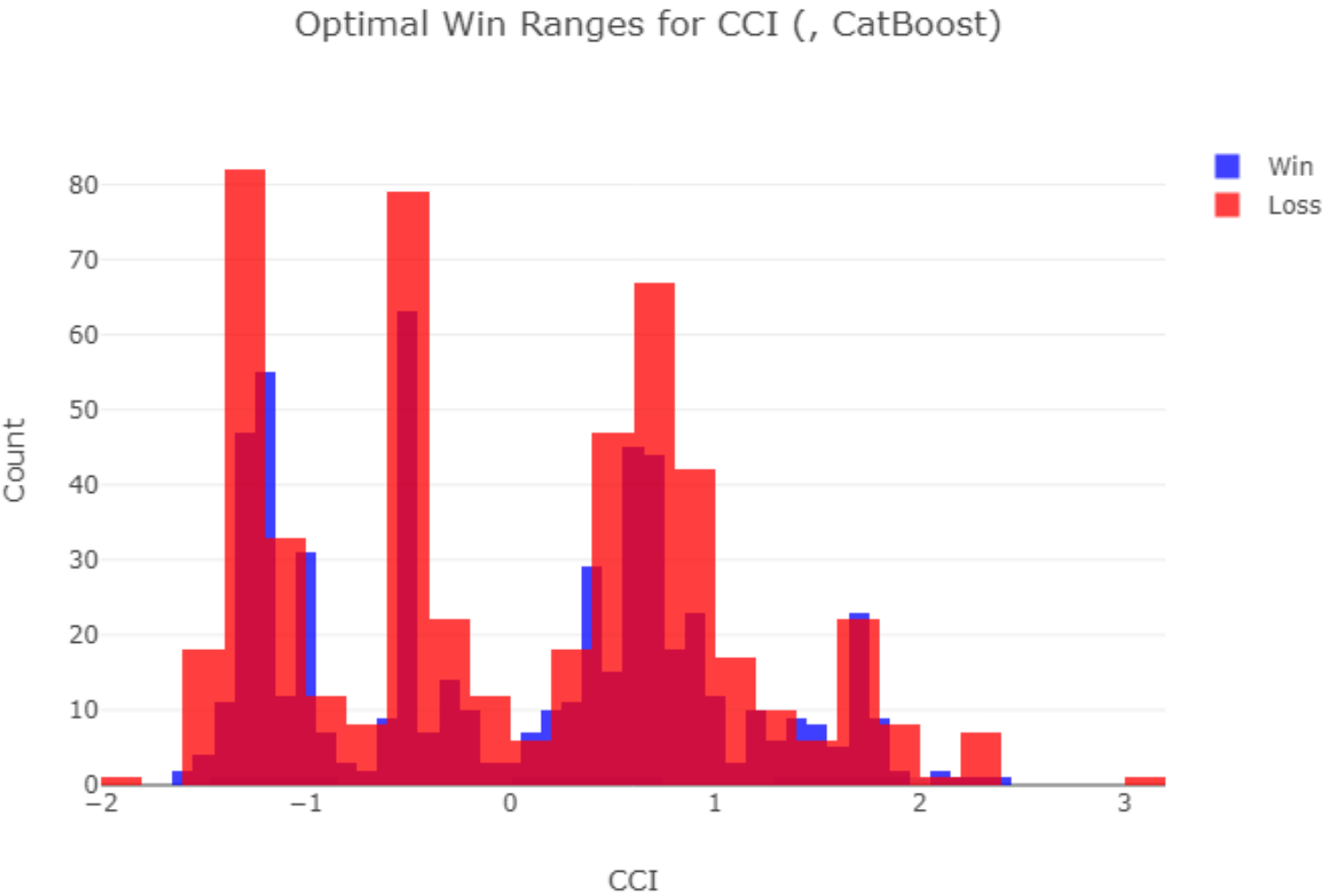
Optimal Win Ranges for ATR (, CatBoost)



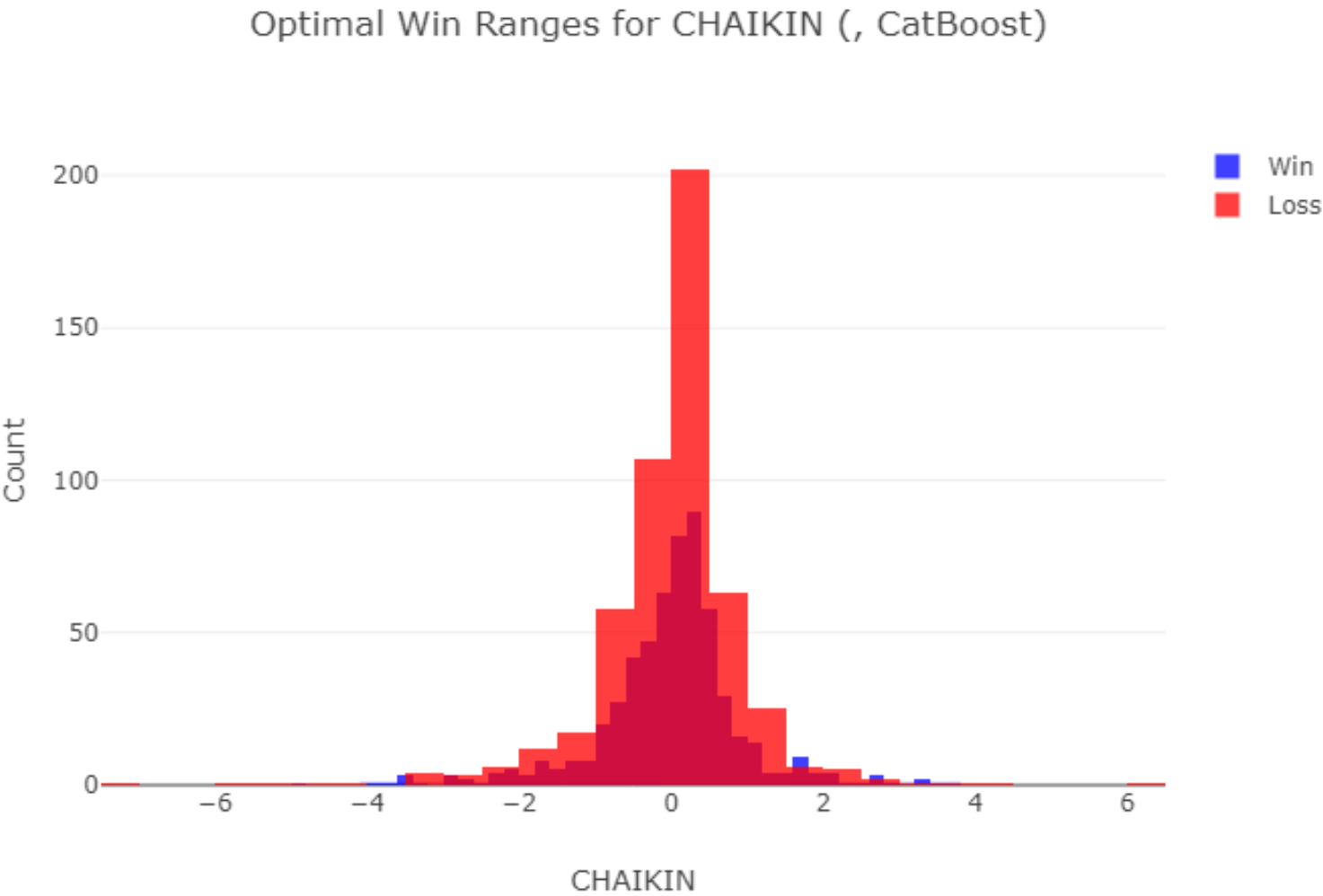
Optimal Win Ranges for AWESOME (, CatBoost)



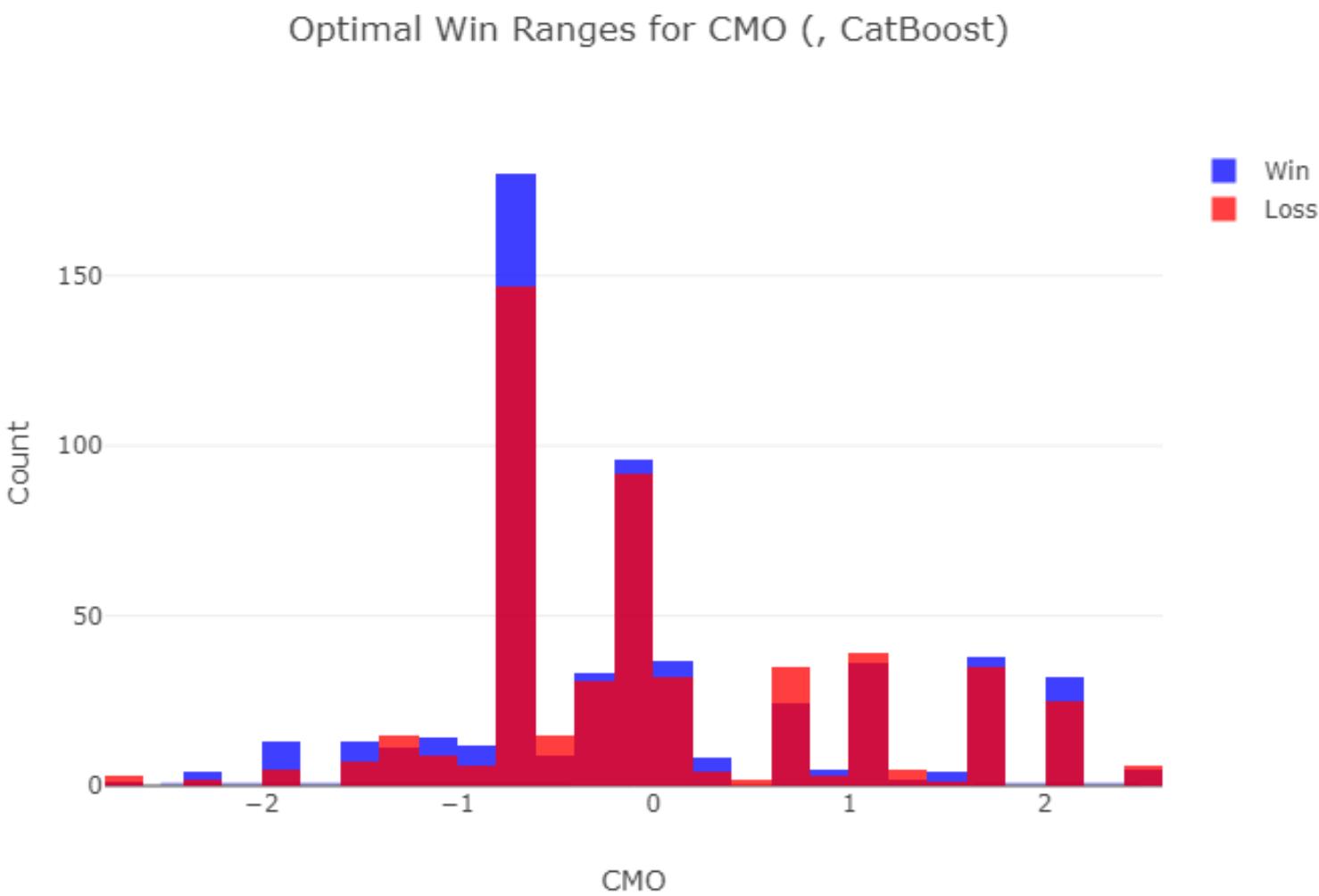
Optimal Win Ranges for CCI (, CatBoost)



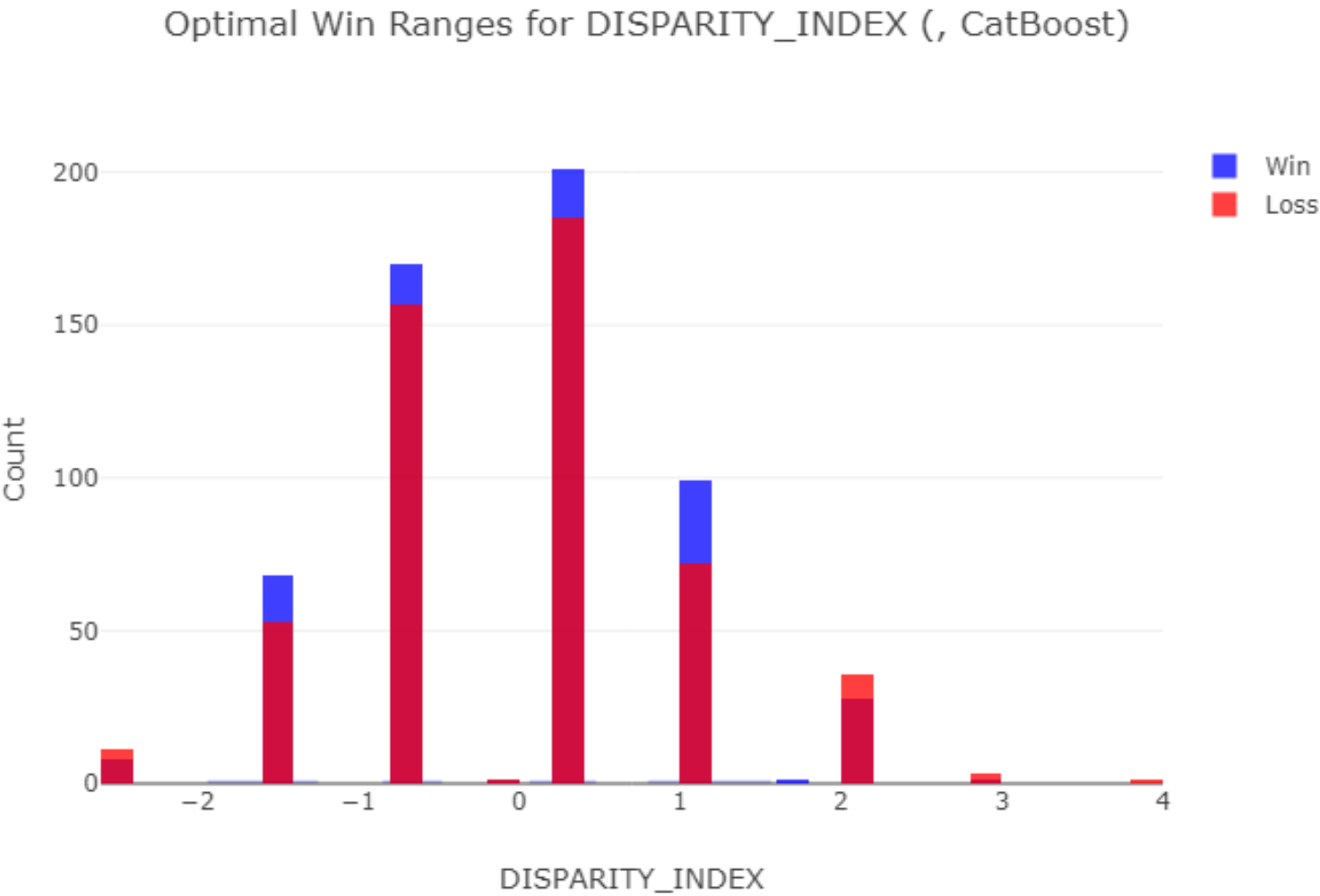
Optimal Win Ranges for CHAIKIN (, CatBoost)



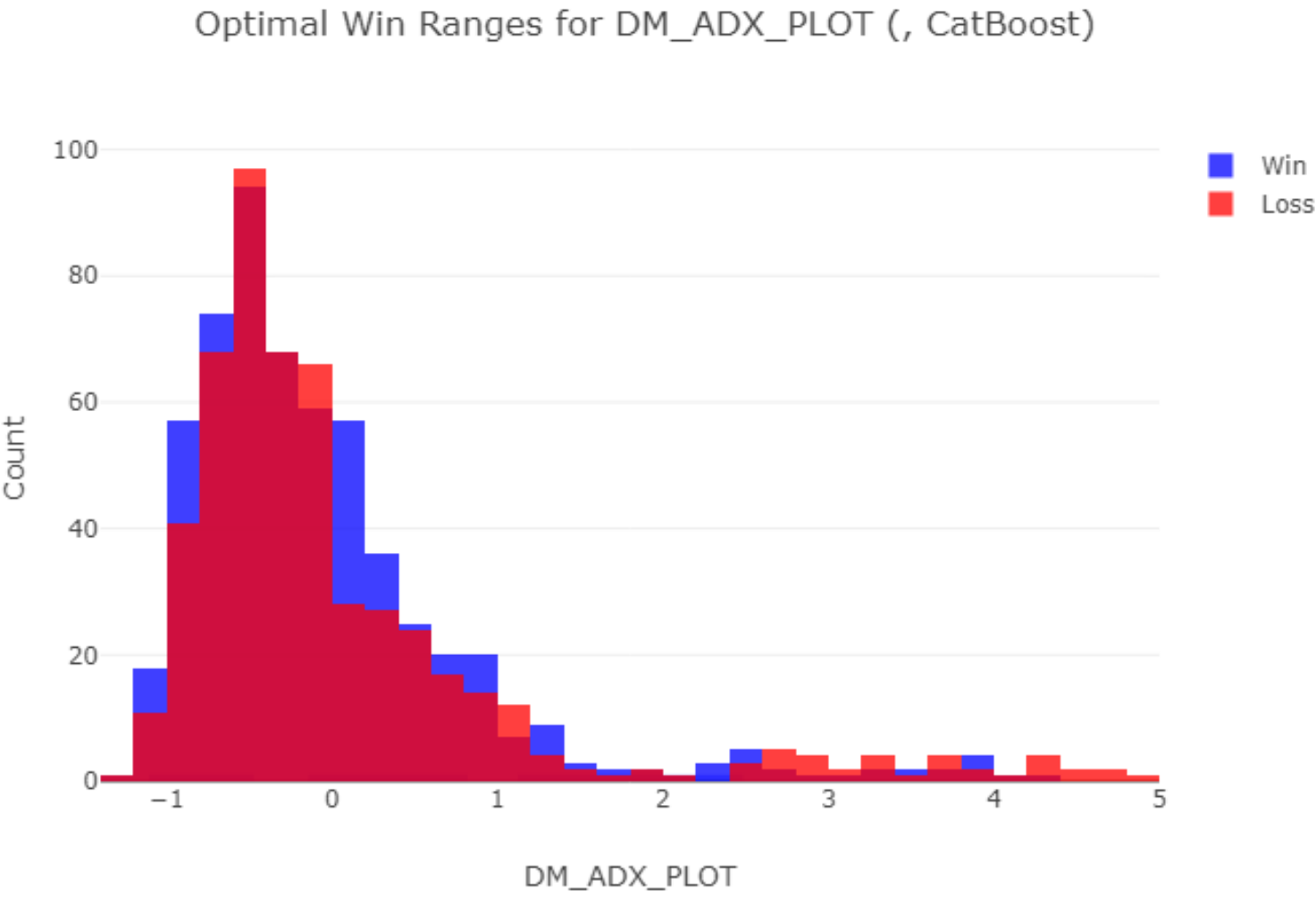
Optimal Win Ranges for CMO (, CatBoost)



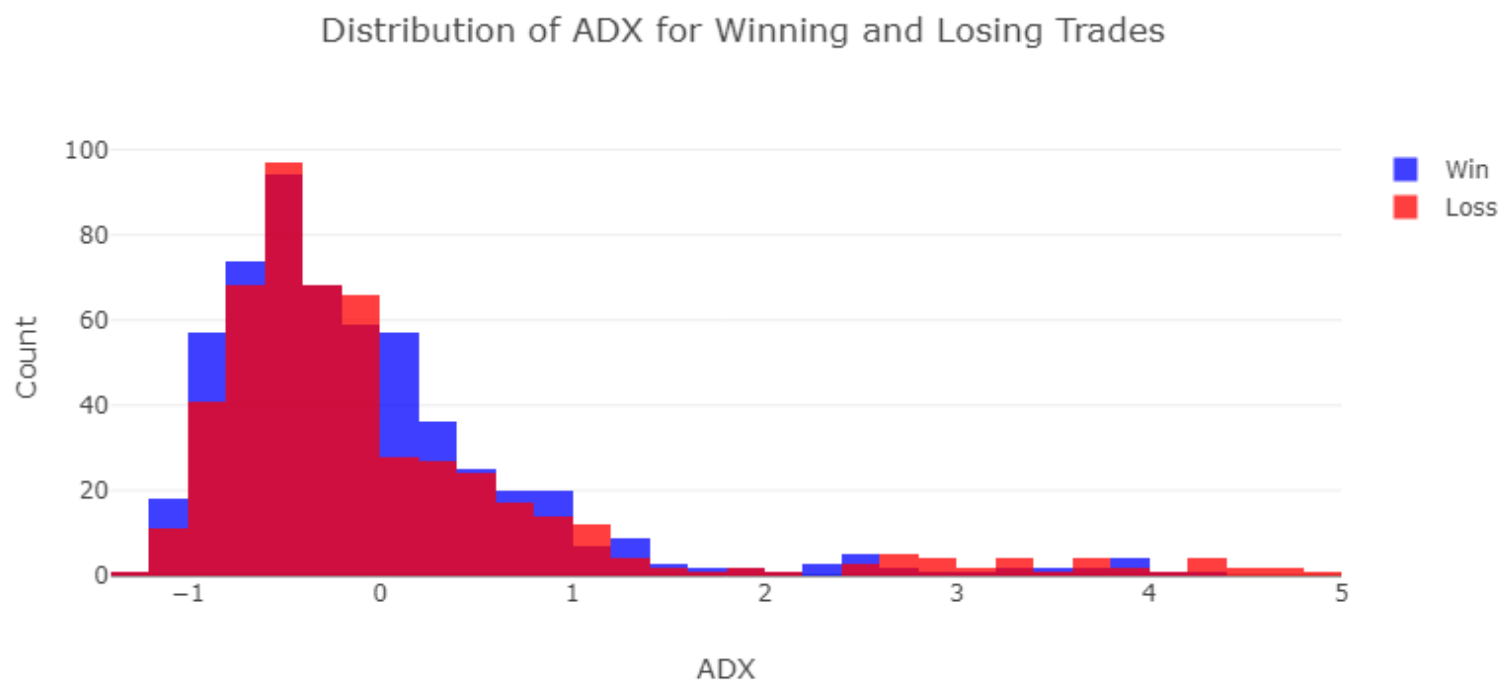
Optimal Win Ranges for DISPARITY_INDEX (, CatBoost)



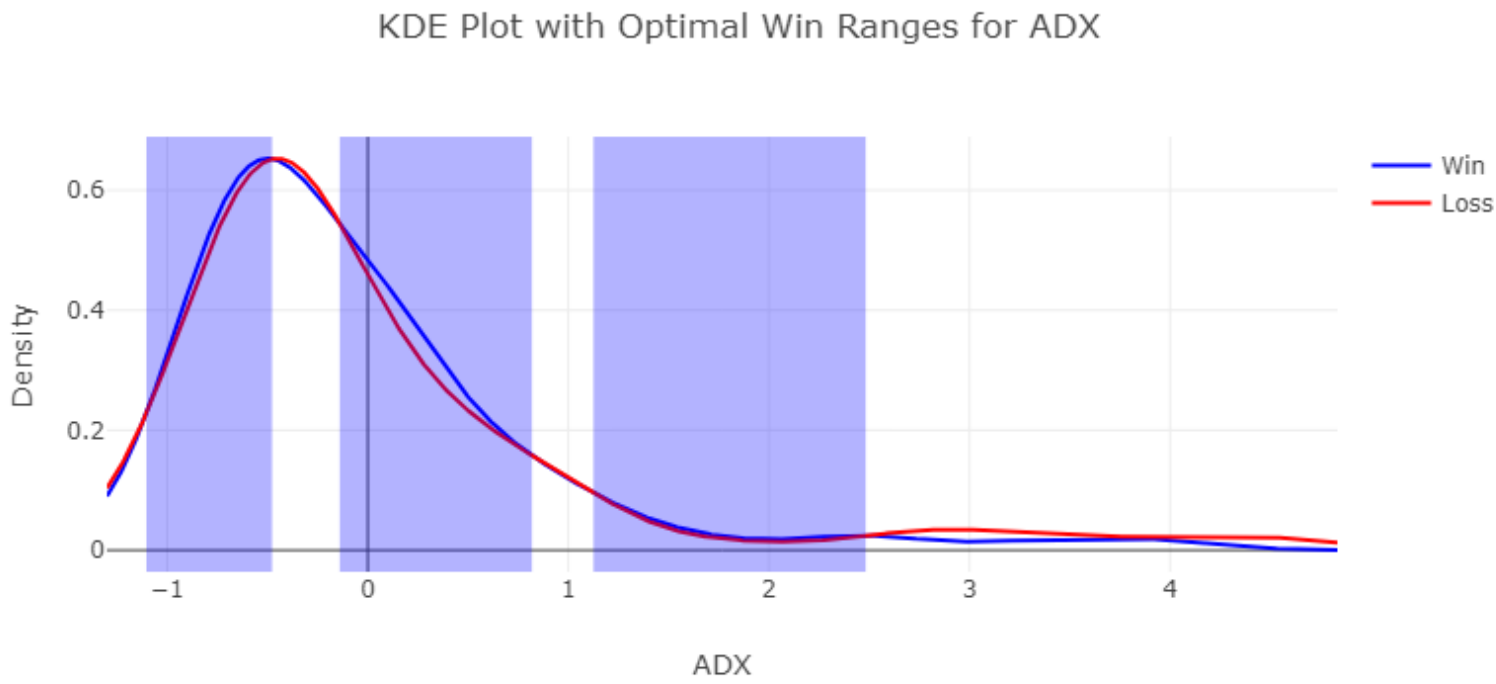
Optimal Win Ranges for DM_ADX_PLOT (, CatBoost)



Distribution of ADX for Winning and Losing Trades



KDE Plot with Optimal Win Ranges for ADX



Mean Indicator Values for Losses

