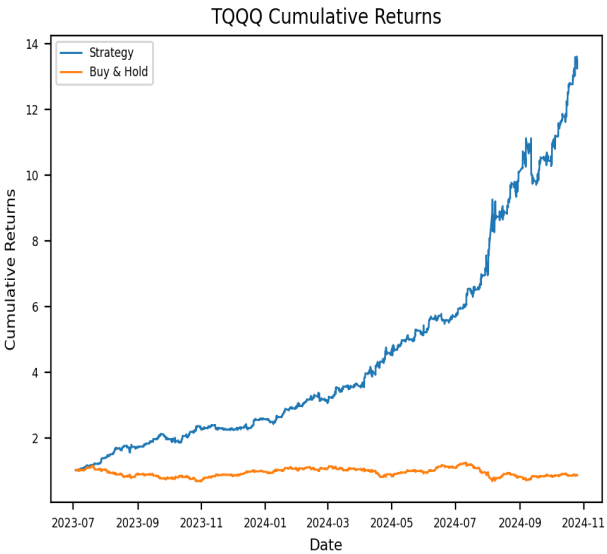
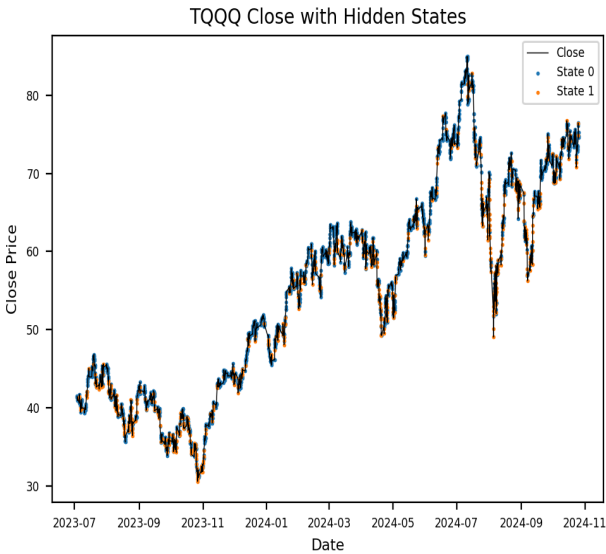
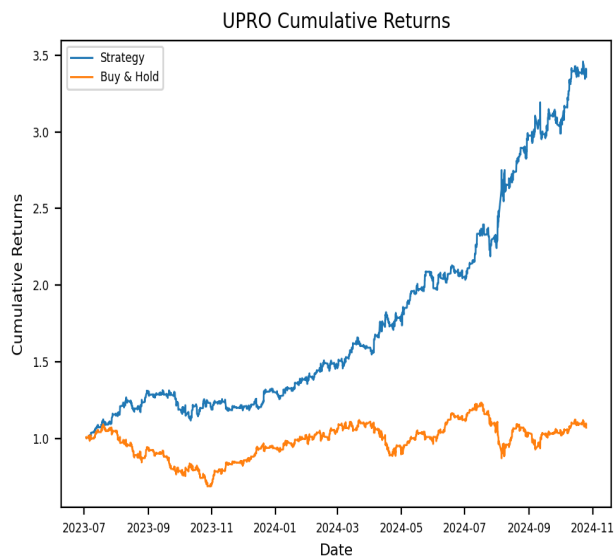
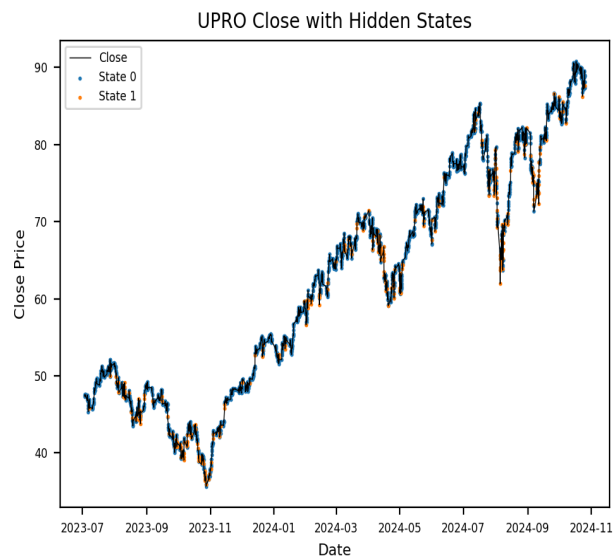


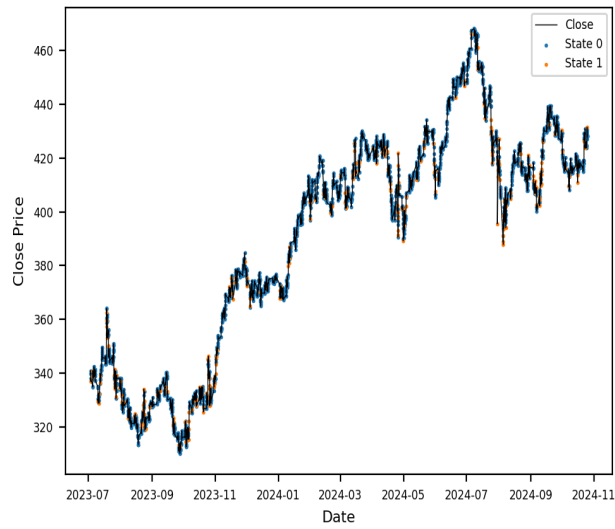
Individual HMM Model Performance Report

Ticker	Strategy Return	Buy & Hold Return	Outperformance	Sharpe Ratio	Max Drawdown
TQQQ	1246.58%	-14.44%	1261.02%	51.33	-12.74%
UPRO	235.90%	7.00%	228.90%	17.15	-14.96%
MSFT	108.69%	-15.64%	124.33%	12.83	-8.66%
QQQ	101.94%	-0.22%	102.16%	17.20	-5.05%
AAPL	100.54%	6.68%	93.86%	10.69	-14.59%
JPM	90.00%	38.98%	51.01%	11.51	-12.65%
GOOG	85.28%	-3.69%	88.97%	7.63	-15.39%
V	41.50%	6.53%	34.97%	6.13	-15.21%
SPY	40.59%	5.43%	35.16%	9.38	-5.58%
DIA	37.67%	13.83%	23.84%	8.99	-6.17%
XOM	25.32%	-10.58%	35.89%	3.41	-15.60%
PLTR	16.17%	13.54%	2.63%	0.68	-37.20%

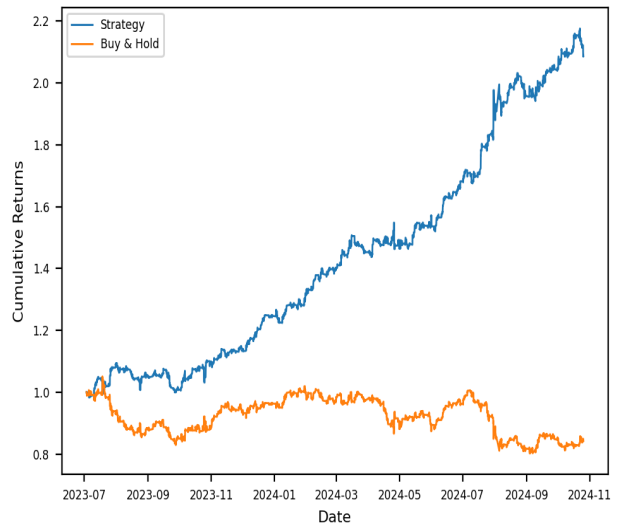




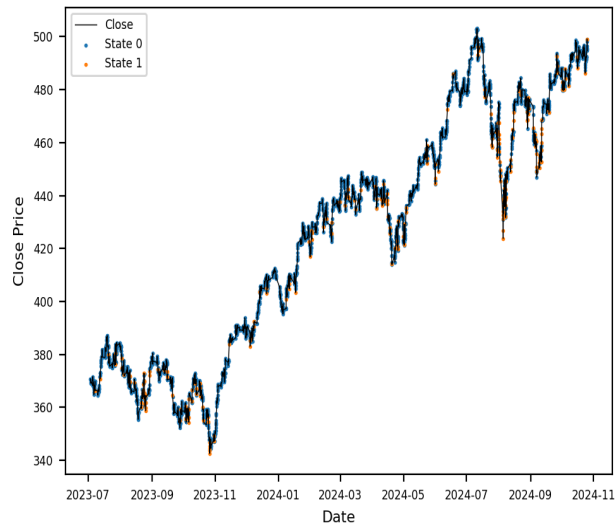
MSFT Close with Hidden States



MSFT Cumulative Returns

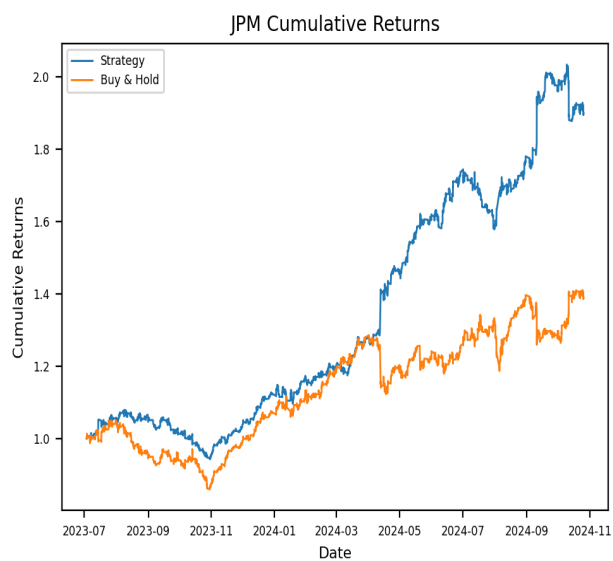
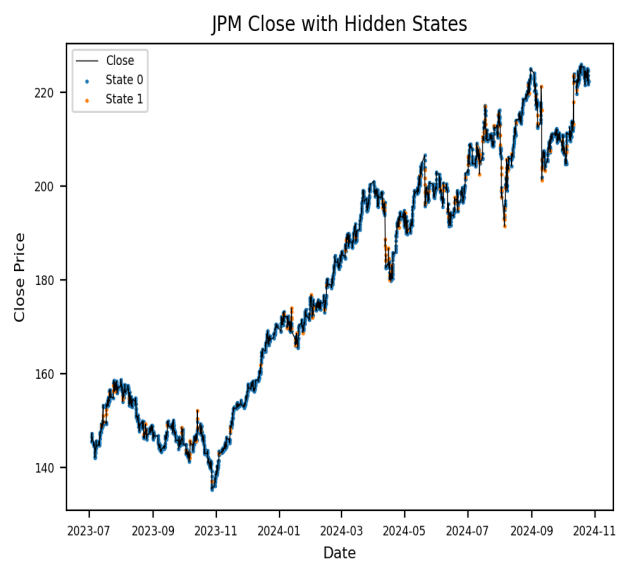
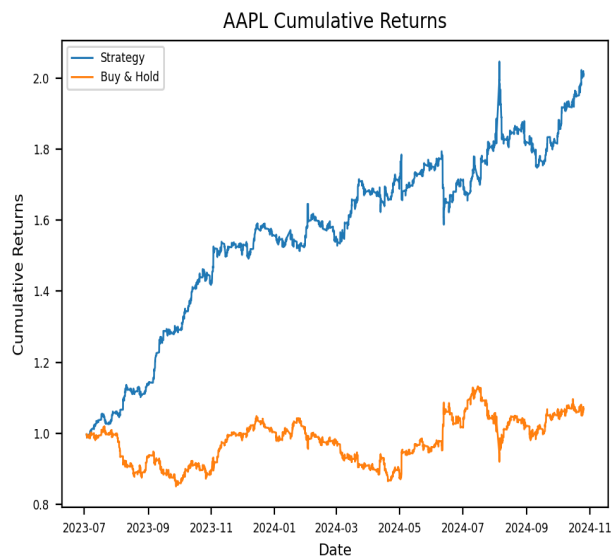
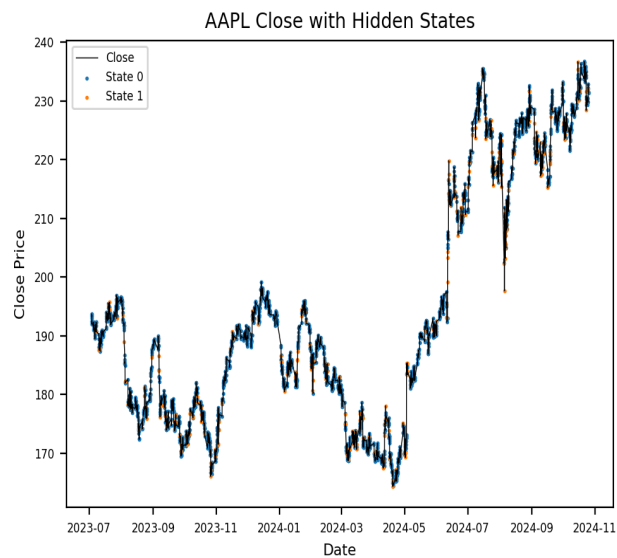


QQQ Close with Hidden States

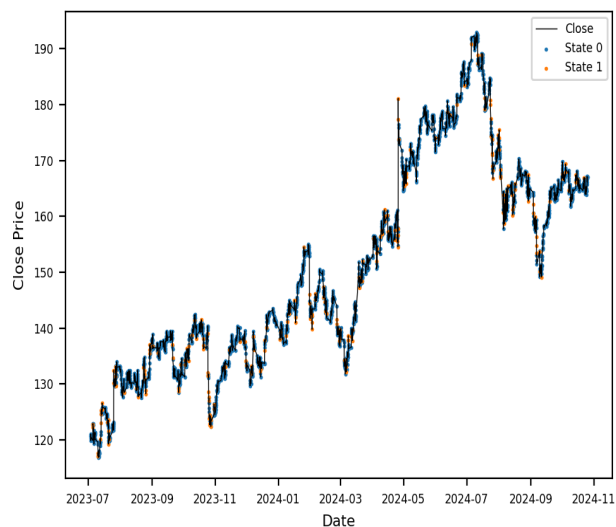


QQQ Cumulative Returns





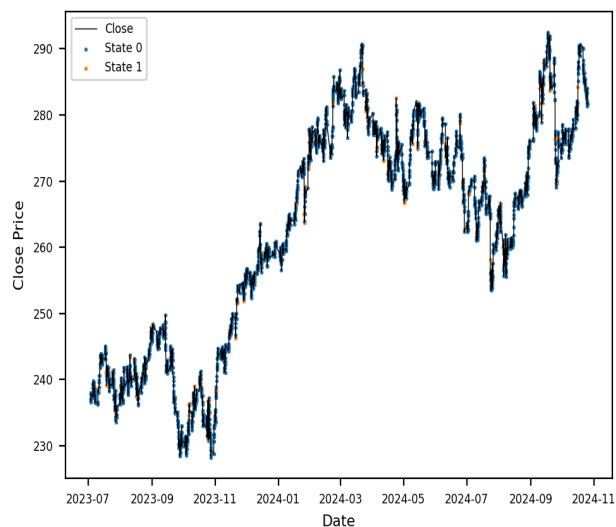
GOOG Close with Hidden States



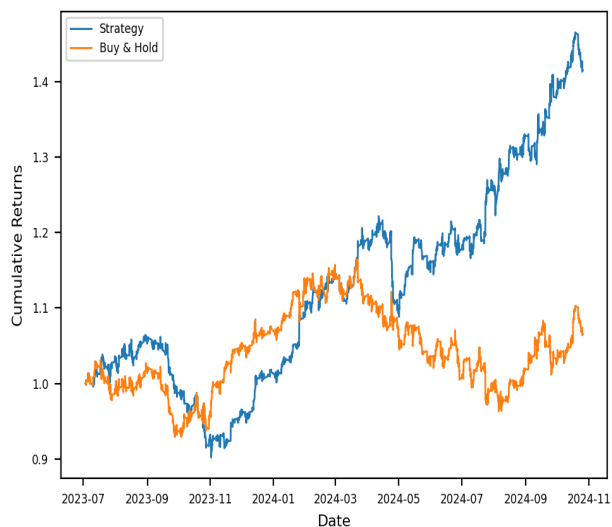
GOOG Cumulative Returns



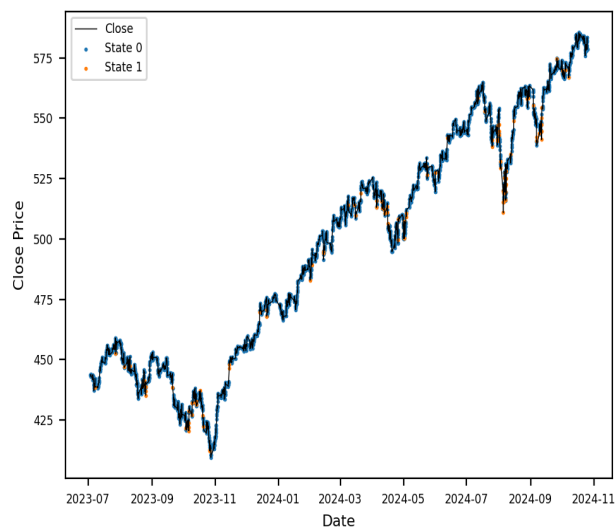
V Close with Hidden States



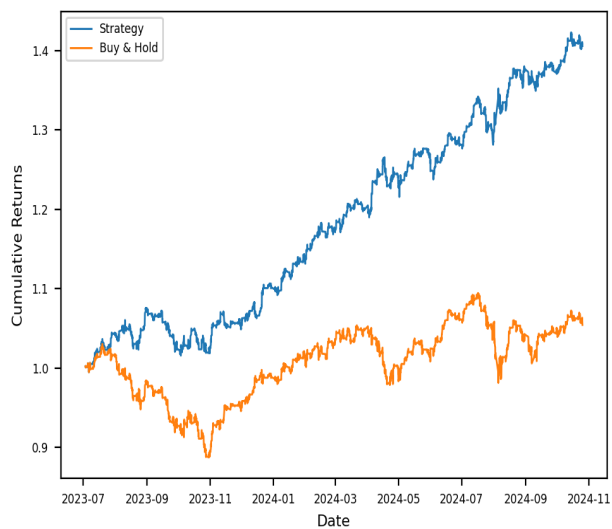
V Cumulative Returns



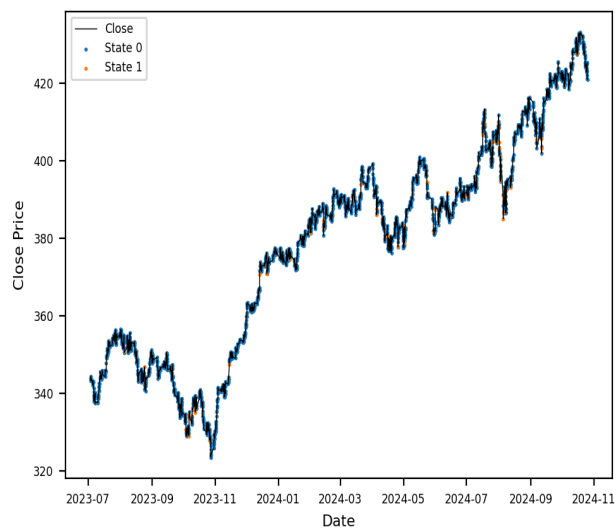
SPY Close with Hidden States



SPY Cumulative Returns



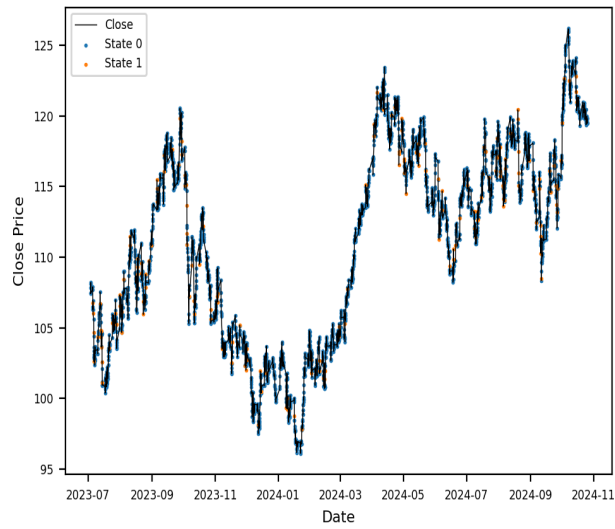
DIA Close with Hidden States



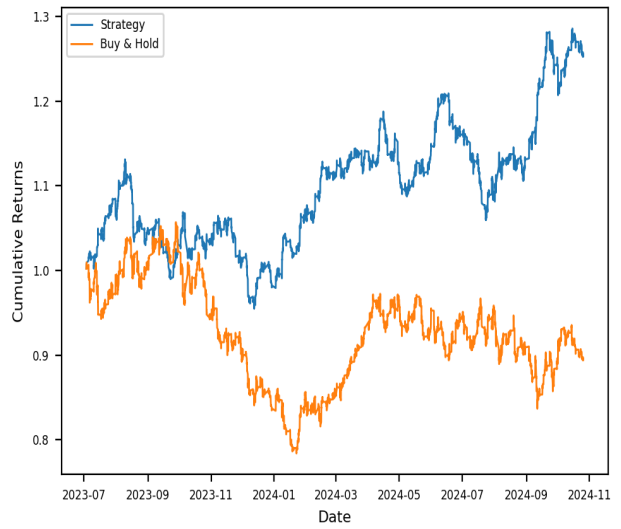
DIA Cumulative Returns



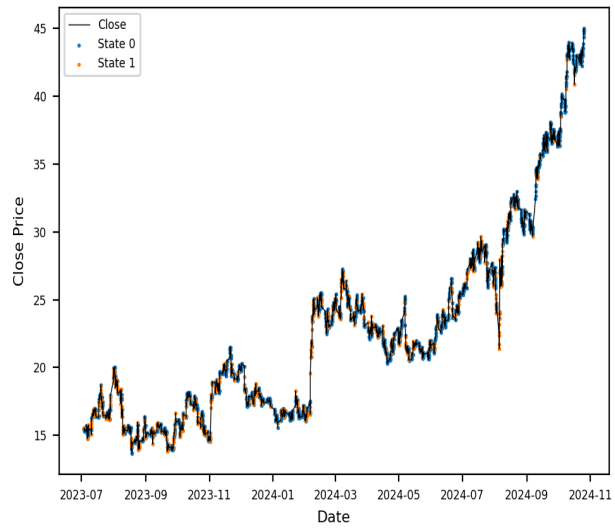
XOM Close with Hidden States



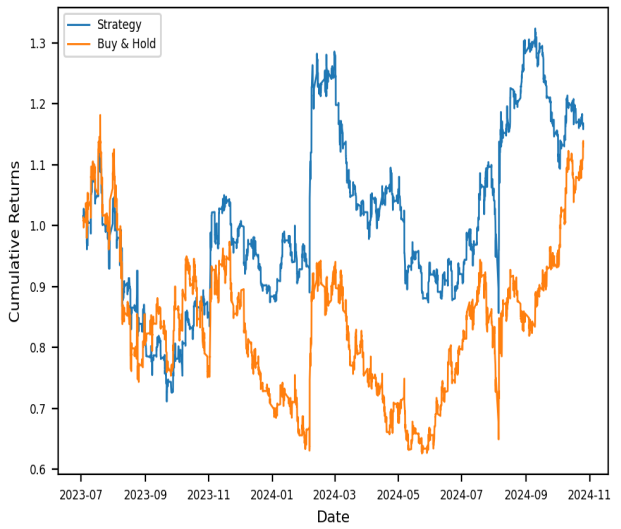
XOM Cumulative Returns



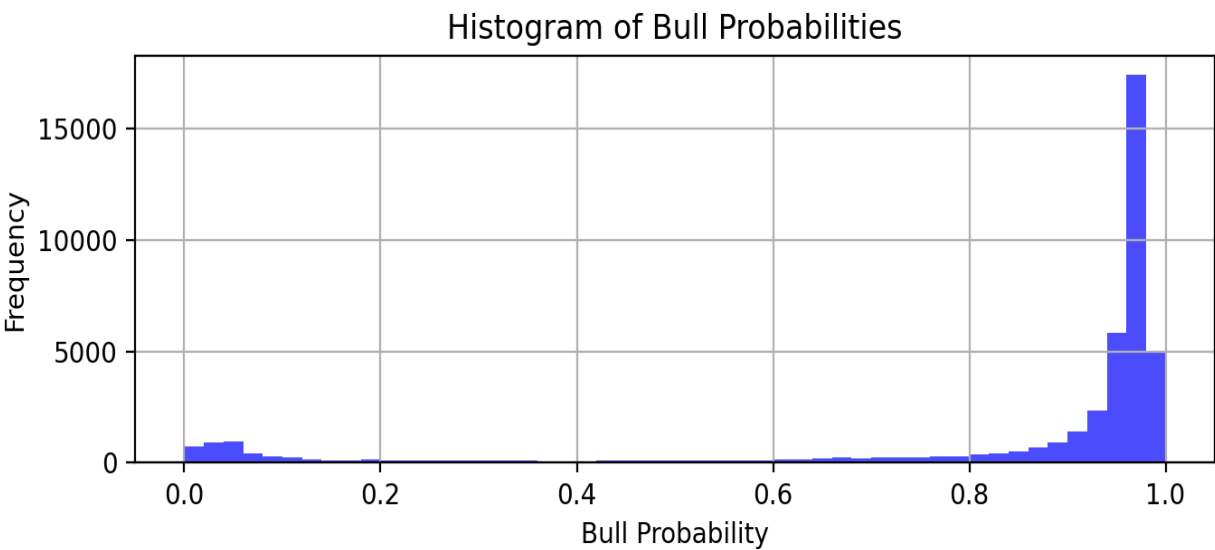
PLTR Close with Hidden States



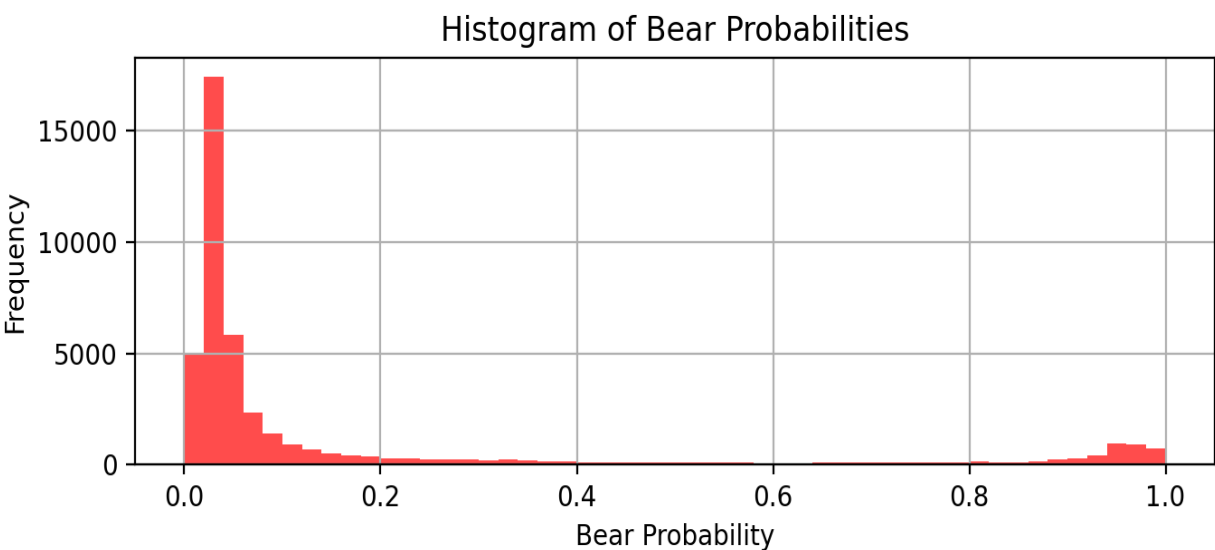
PLTR Cumulative Returns



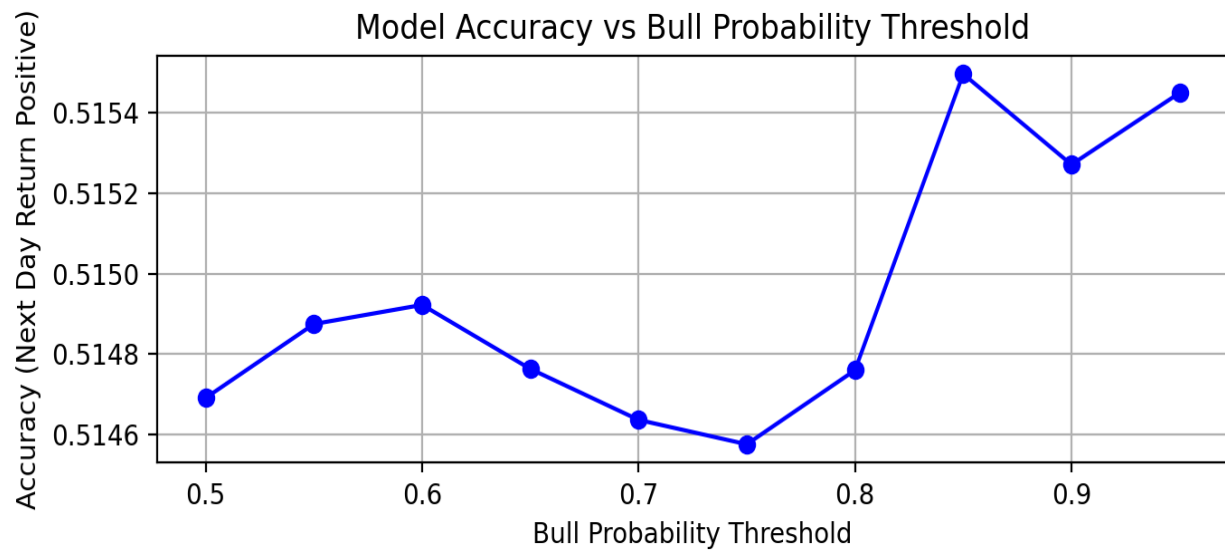
Histogram of Bull Probabilities



Histogram of Bear Probabilities



Model Accuracy vs Bull Probability Threshold



Model Accuracy vs Bear Probability Threshold

