Apple Stock Prediction Model

Final Performance Report

Generated:	2025-12-07 13:24:05
Model Type:	LGBMRegressor
Data Period:	2015-03-13 to 2025-11-28
Total Samples:	2,696 trading days
Features:	78 engineered features

1. Walk-Forward Validation Performance

Metric	Value
RMSE	1.9384%
MAE	1.4524%
R^2	-0.3042
Sharpe Ratio	1.2146

2. Backtest Trading Strategy

Metric	Value
Initial Capital	$100,000.00
Final Equity	$51,729.69
Total Return	-48.27%
Annualized Return	-26.40%
Sharpe Ratio	-1.3305
Max Drawdown	-53.83%
Win Rate	49.20%

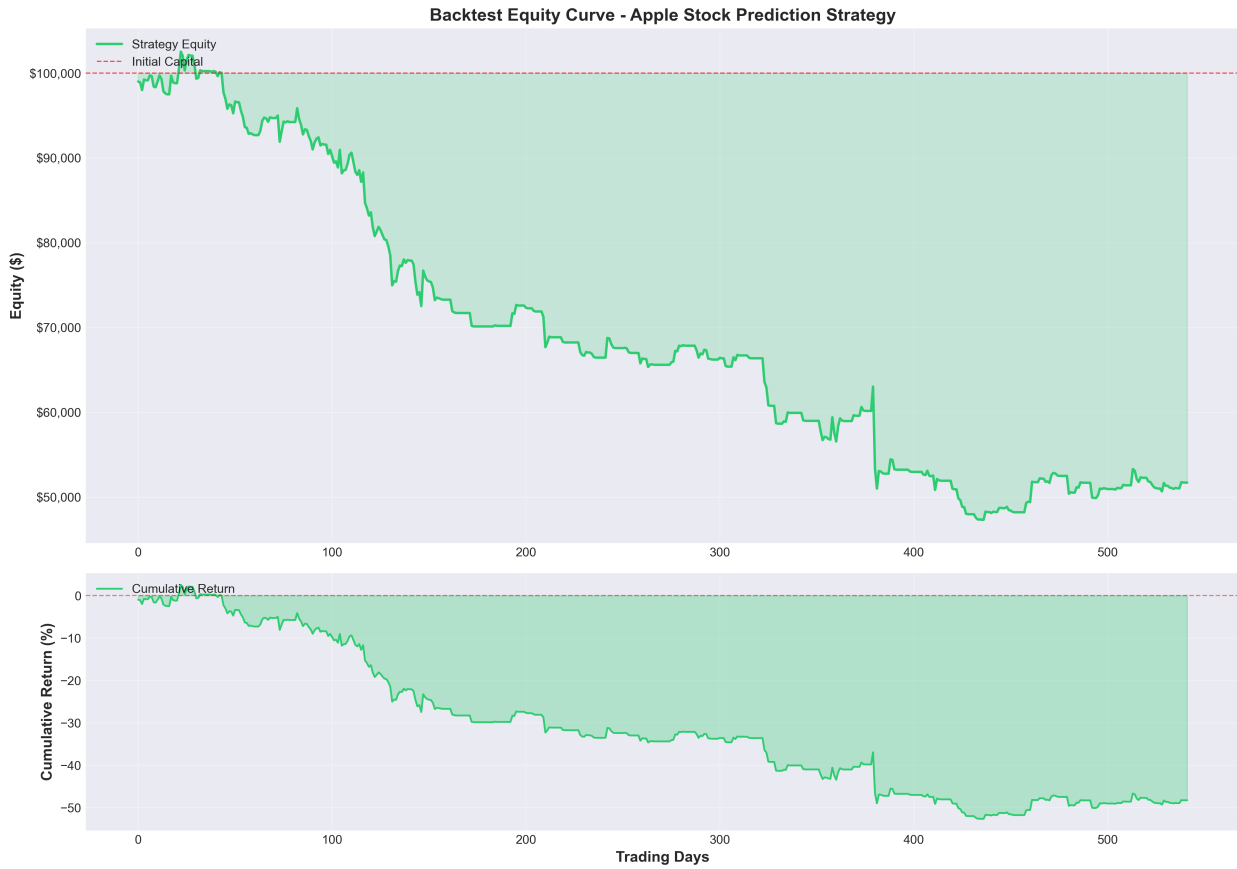
Total Trades	310

3. Top 5 Feature Importance (SHAP)

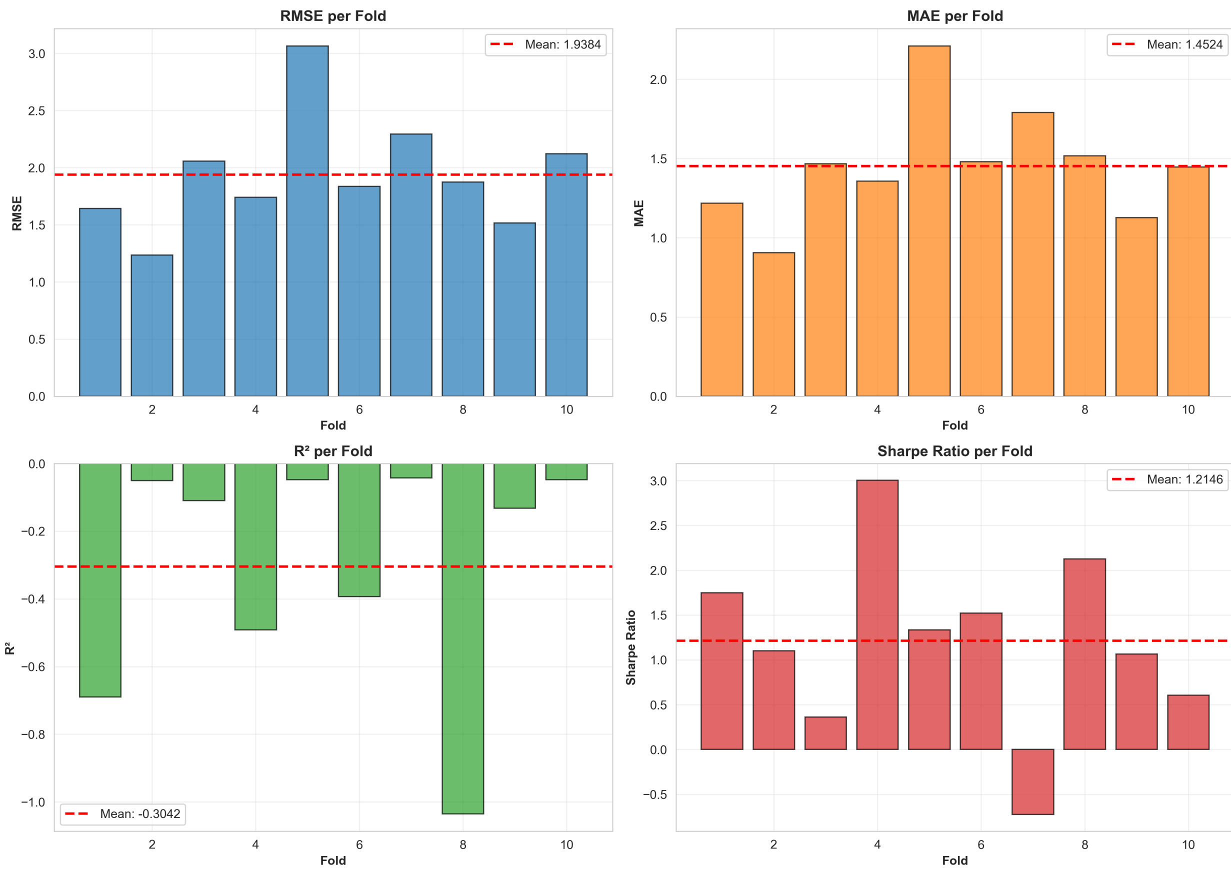
Rank	Feature	Mean |SHAP|
1	close_AMZN	0.159552
2	bb_upper_20	0.100911
3	daily_return	0.100676
4	rsi_divergence	0.095684
5	macd	0.091658

4. Key Visualizations

Backtest Equity Curve



Walk-Forward Cross-Validation Metrics



RMSE per Fold
Mean: 1.9384
RMSE
Fold
MAE per Fold
Mean: 1.4524
MAE
Fold
R² per Fold
Mean: -0.3042
R²
Fold
Sharpe Ratio per Fold
Mean: 1.2146
Sharpe Ratio
Fold

SHAP Feature Importance Summary