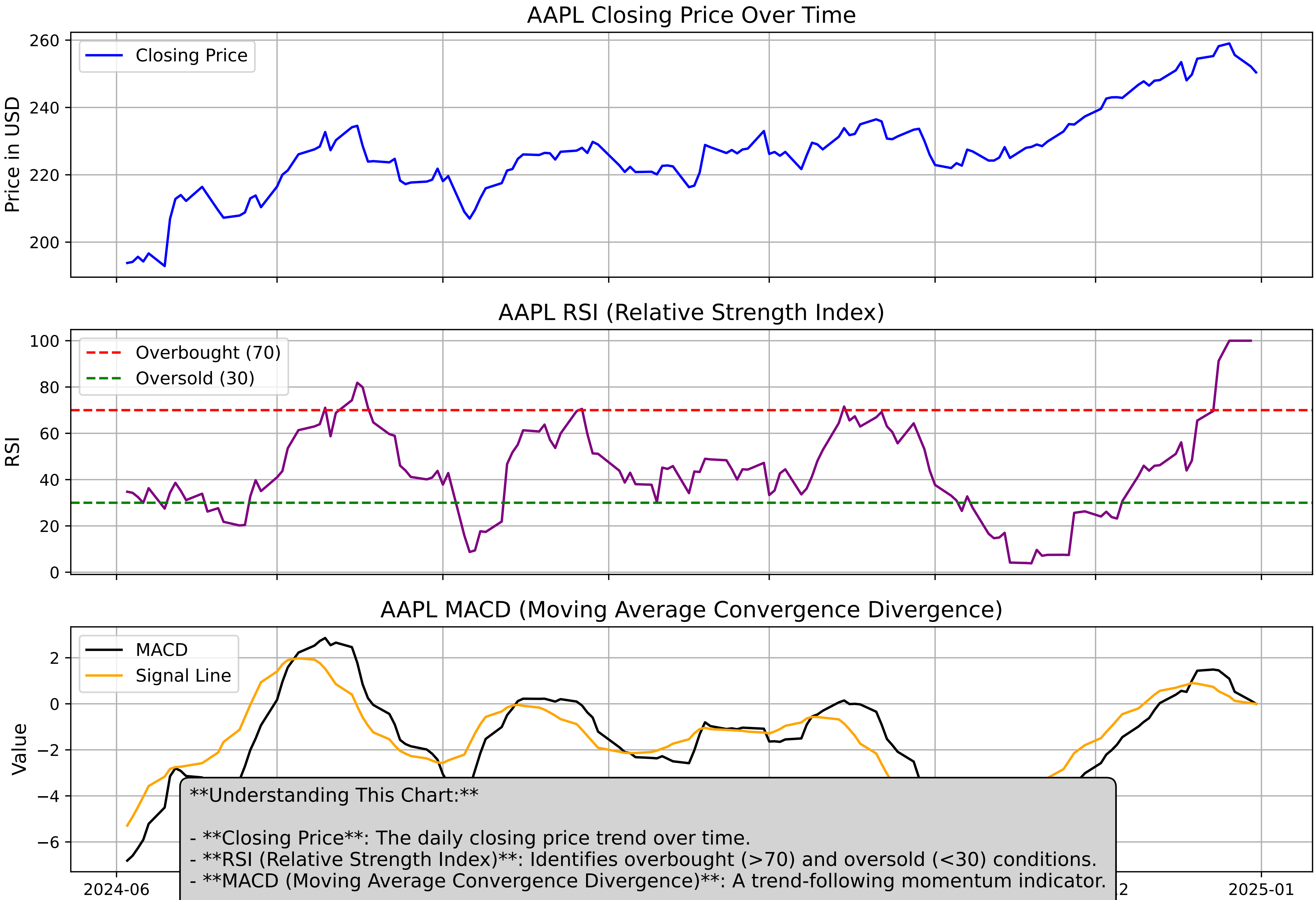
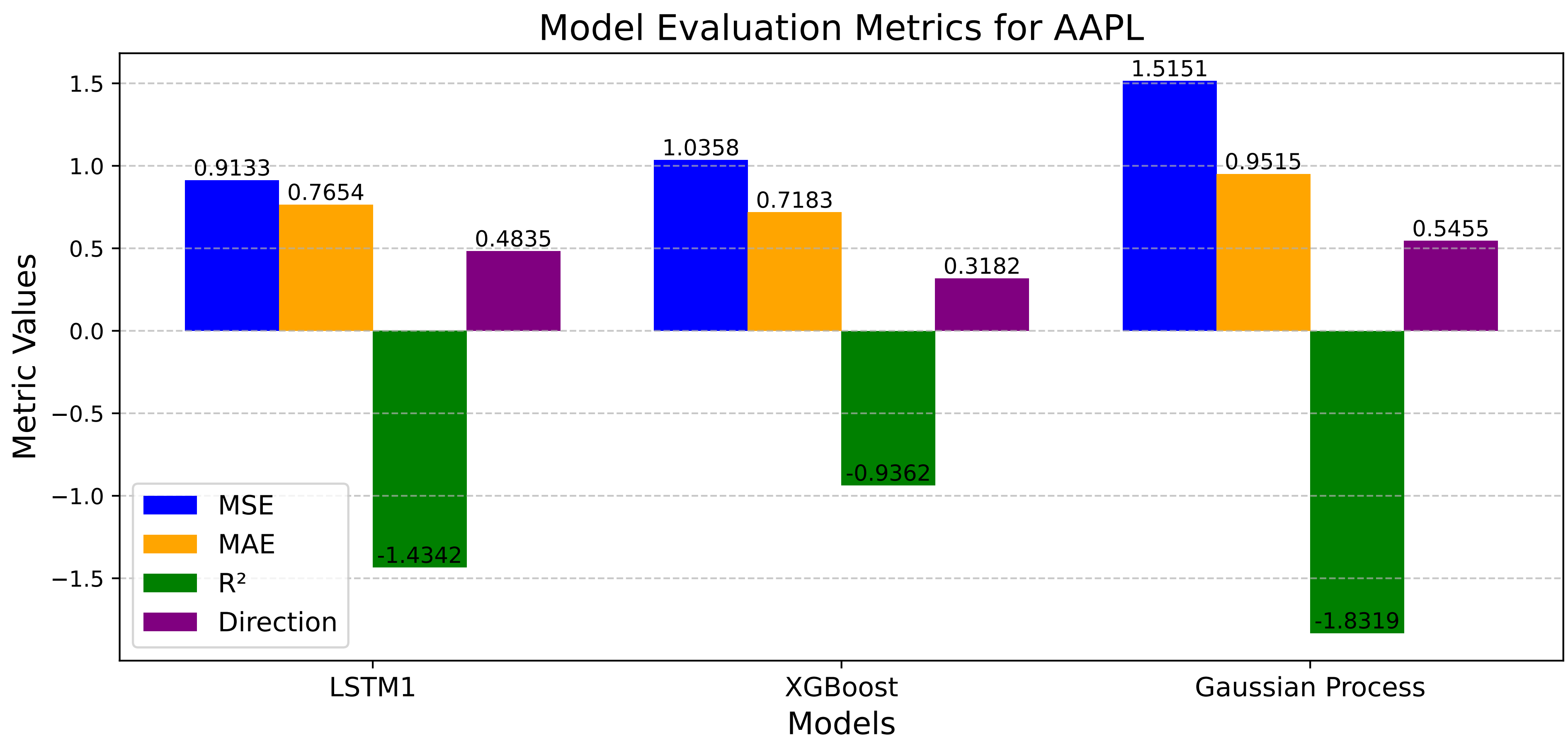


Understanding This Chart:

- **Closing Price**: The daily closing price trend over time.
- **RSI (Relative Strength Index)**: Identifies overbought (>70) and oversold (<30) conditions.
- **MACD (Moving Average Convergence Divergence)**: A trend-following momentum indicator.

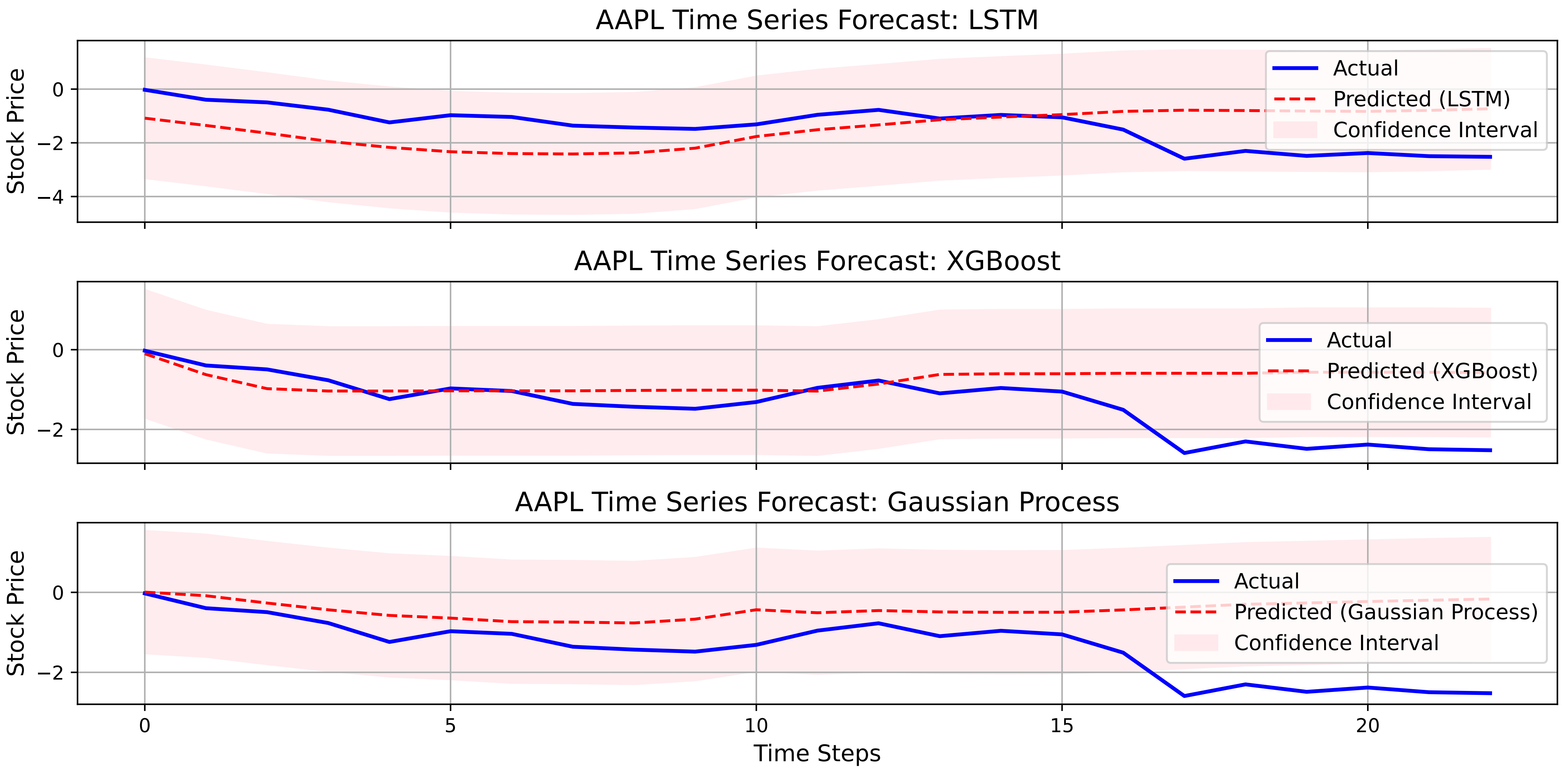
Use this analysis to identify trading opportunities and assess market trends.

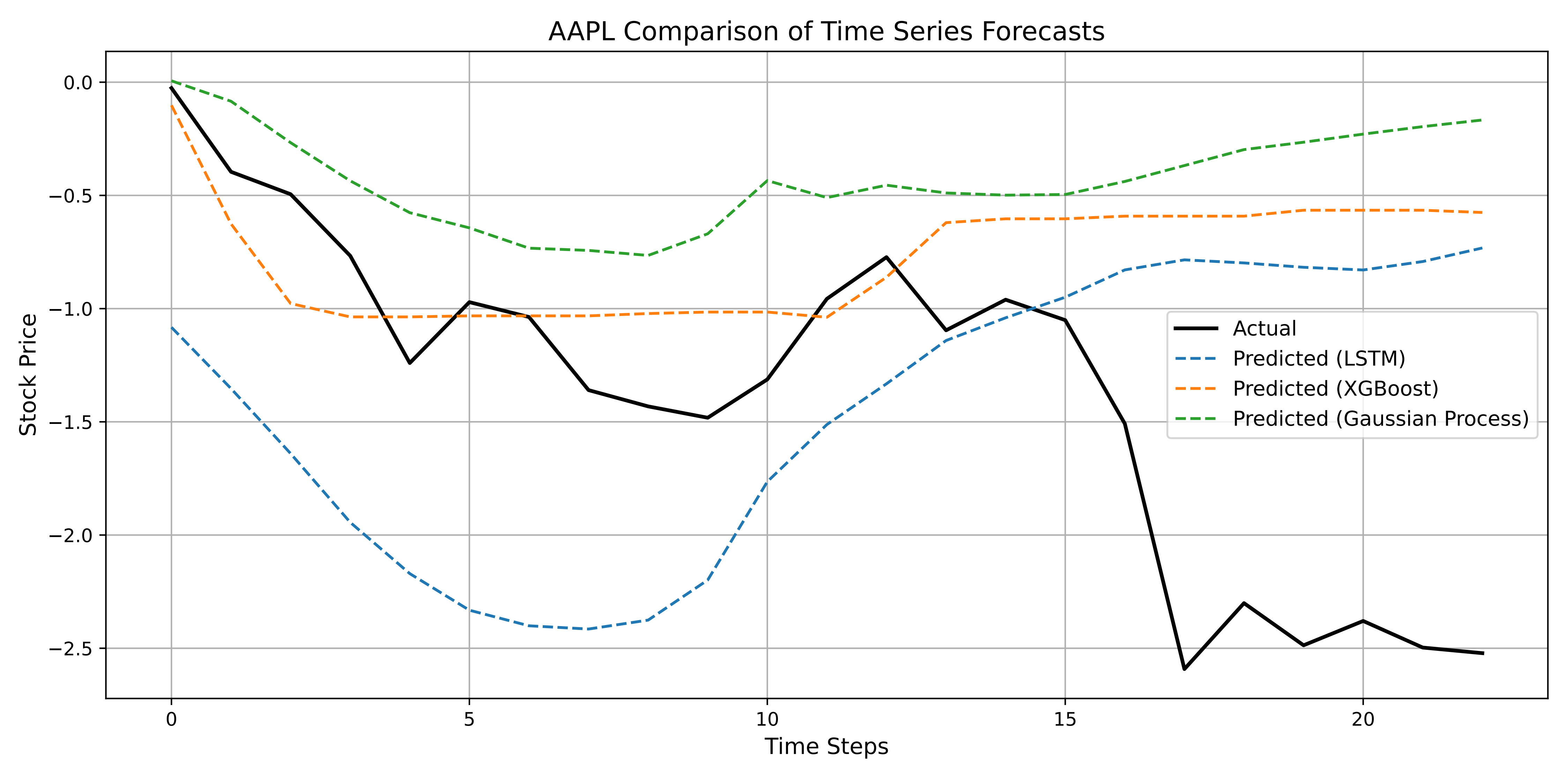


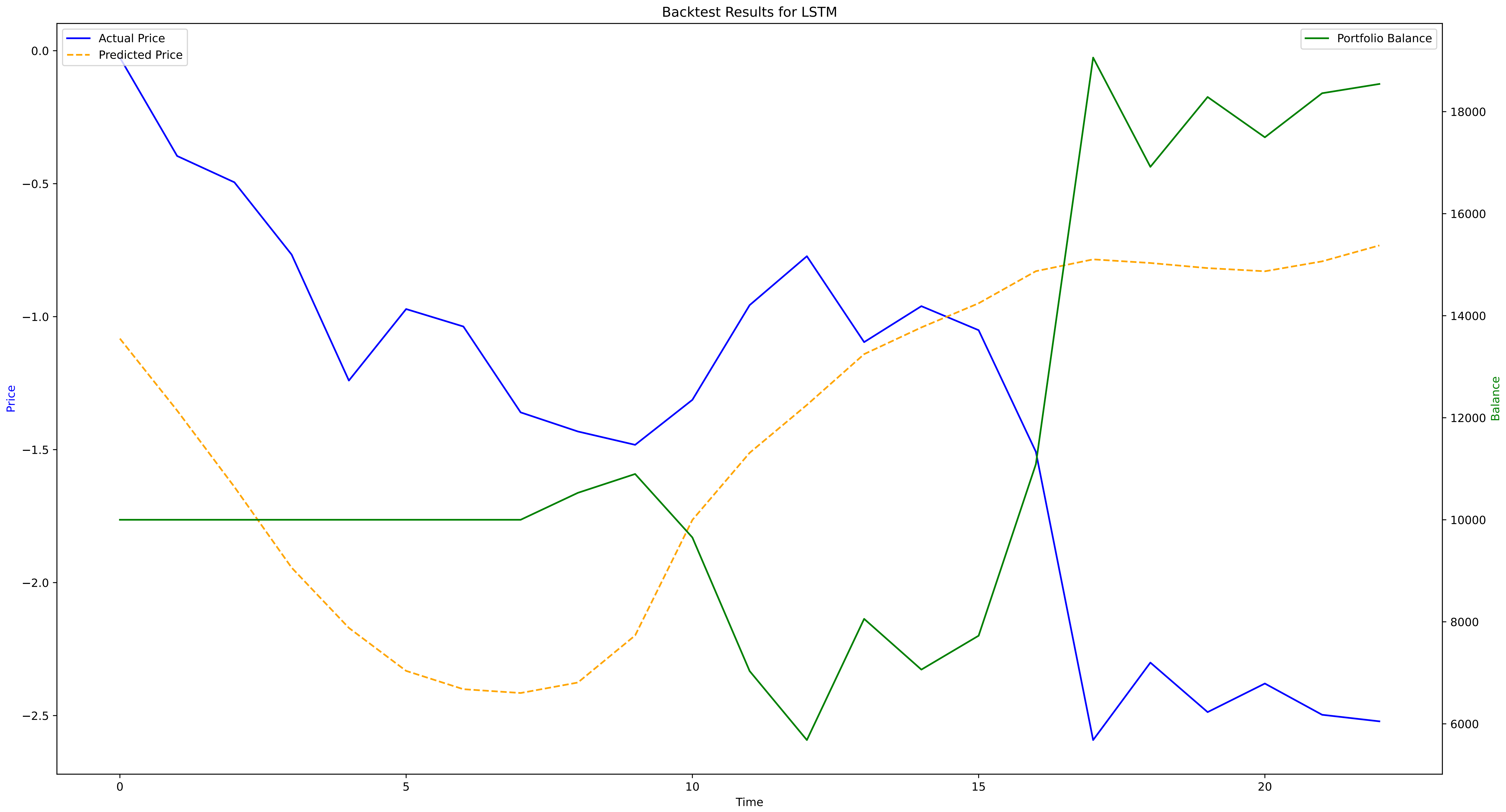
 Understanding This Chart:

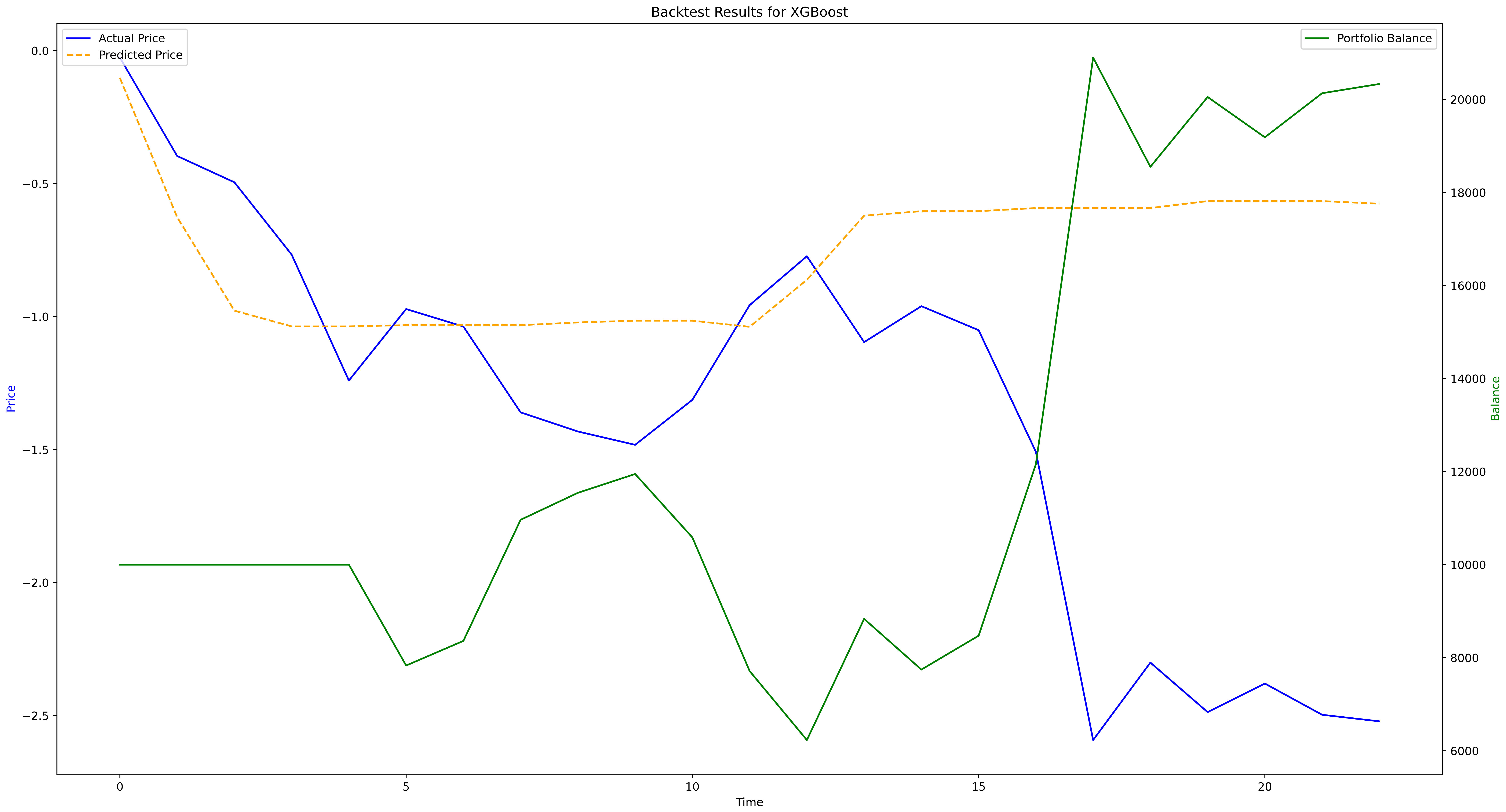
- **MSE (Mean Squared Error):** Measures how far predictions deviate from actual values. **Lower is better**.
- **MAE (Mean Absolute Error):** Similar to MSE but takes absolute differences. **Lower is better**.
- **R² Score:** Represents how well predictions fit the actual data. **Closer to 1 is better**.
- **Directional Accuracy:** Measures how often the model predicts the correct trend direction. **Higher is better**.

 Use this chart to compare models and identify the most accurate predictor for stock prices.

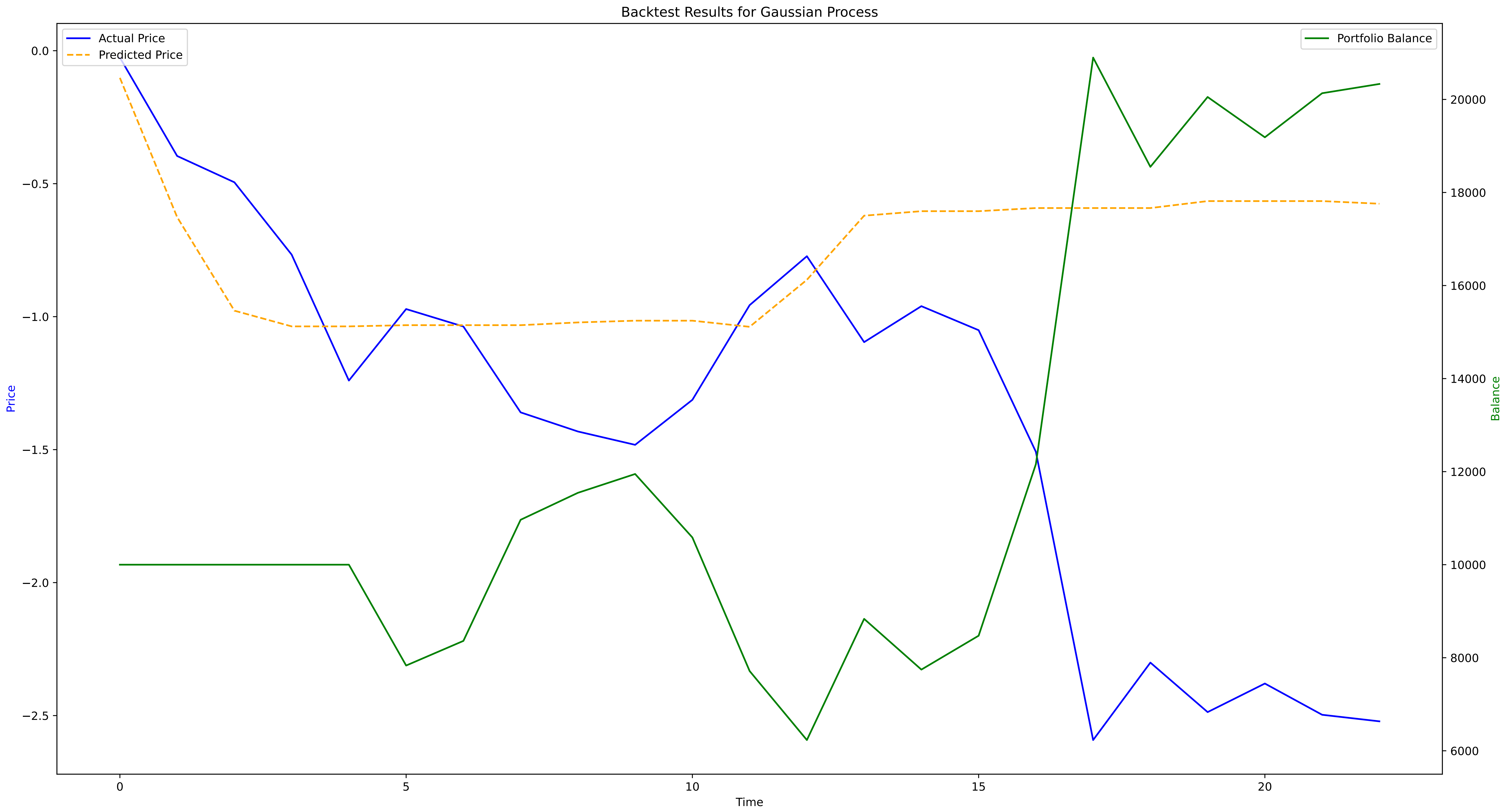

AAPL Time Series Forecast: LSTM
Stock Price
Actual
Predicted (LSTM)
Confidence Interval
AAPL Time Series Forecast: XGBoost
Stock Price
Actual
Predicted (XGBoost)
Confidence Interval
AAPL Time Series Forecast: Gaussian Process
Stock Price
Actual
Predicted (Gaussian Process)
Confidence Interval
0
−2
−4
0
5
10
15
20
Time Steps


AAPL Comparison of Time Series Forecasts
0.0
−0.5
−1.0
−1.5
−2.0
−2.5
Stock Price
0
5
10
15
20
Time Steps
Actual
Predicted (LSTM)
Predicted (XGBoost)
Predicted (Gaussian Process)


Backtest Results for LSTM
Actual Price
Predicted Price
Portfolio Balance
Price
Balance
Time
0.0
−0.5
−1.0
−1.5
−2.0
−2.5
6000
8000
10000
12000
14000
16000
18000
0
5
10
15
20

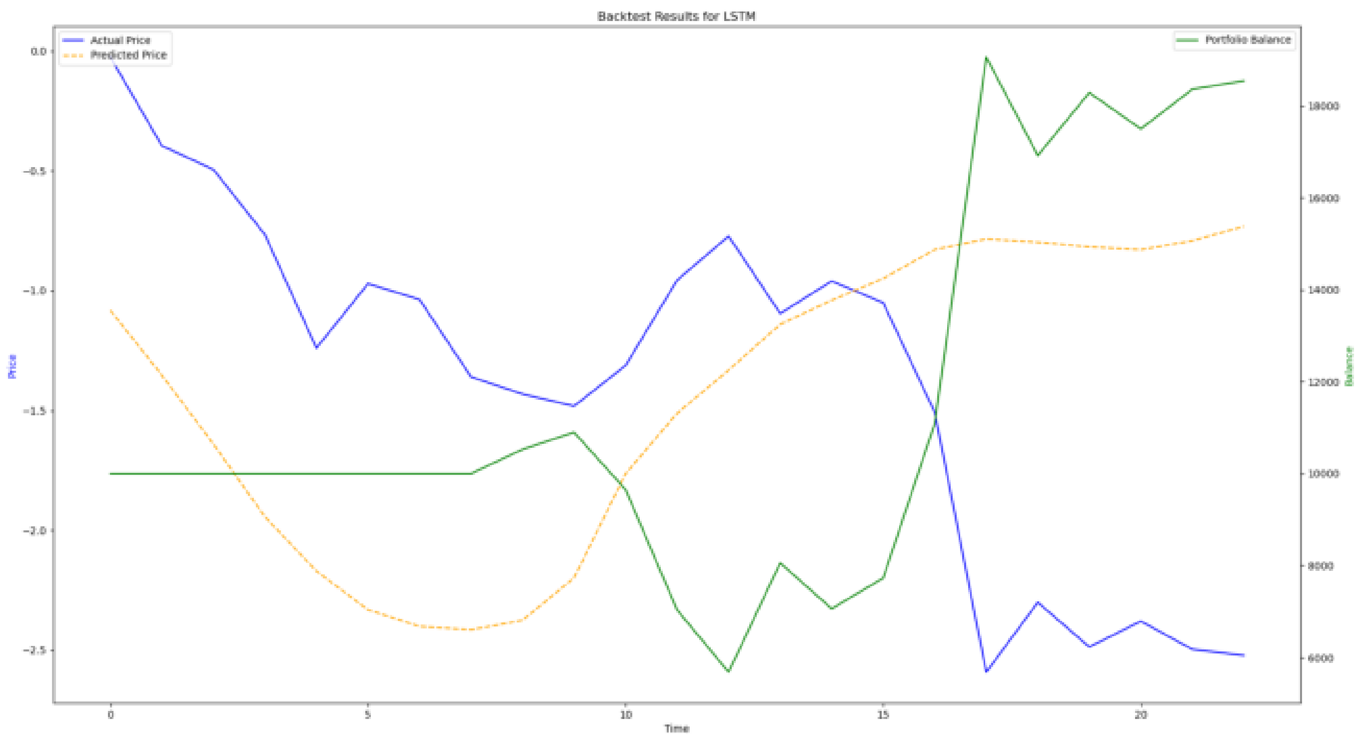


Backtest Results for XGBoost
Actual Price
Predicted Price
Portfolio Balance
Price
Balance
Time
0.0
−0.5
−1.0
−1.5
−2.0
−2.5
20000
18000
16000
14000
12000
10000
8000
6000
0
5
10
15
20

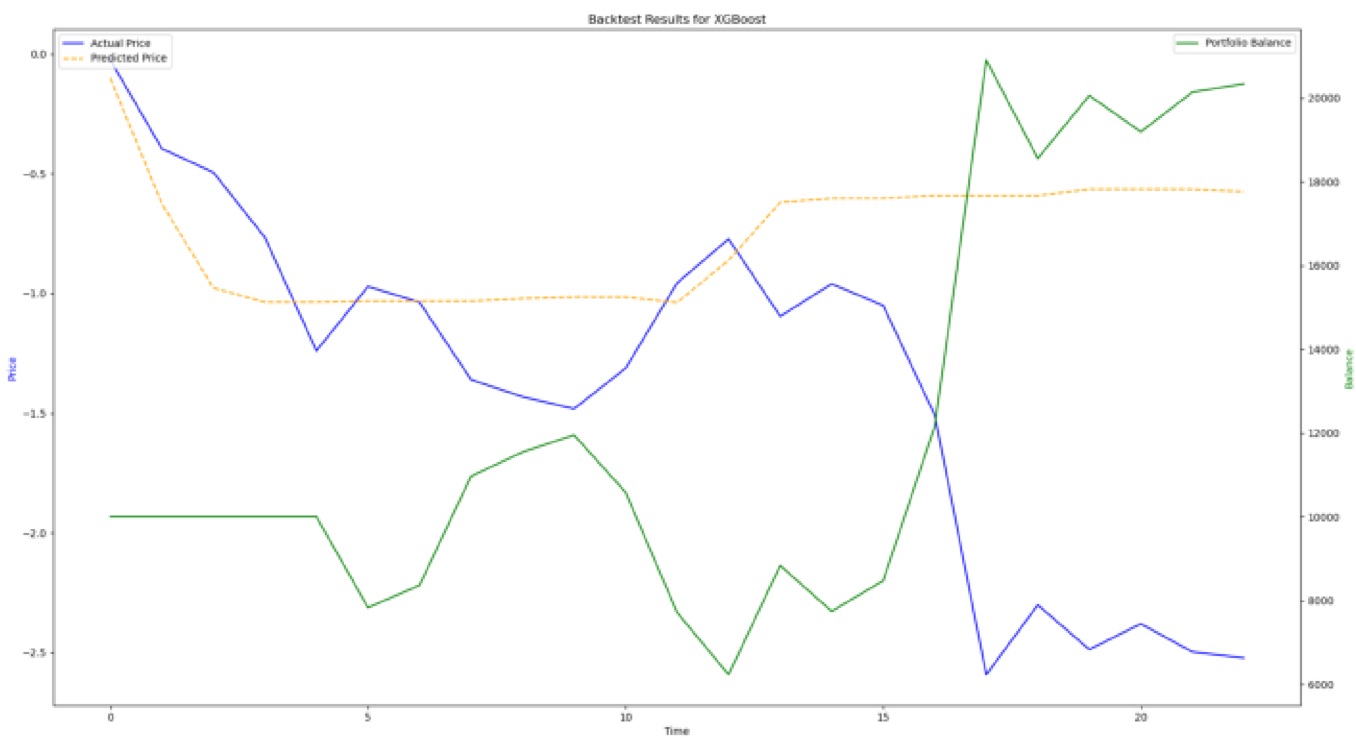


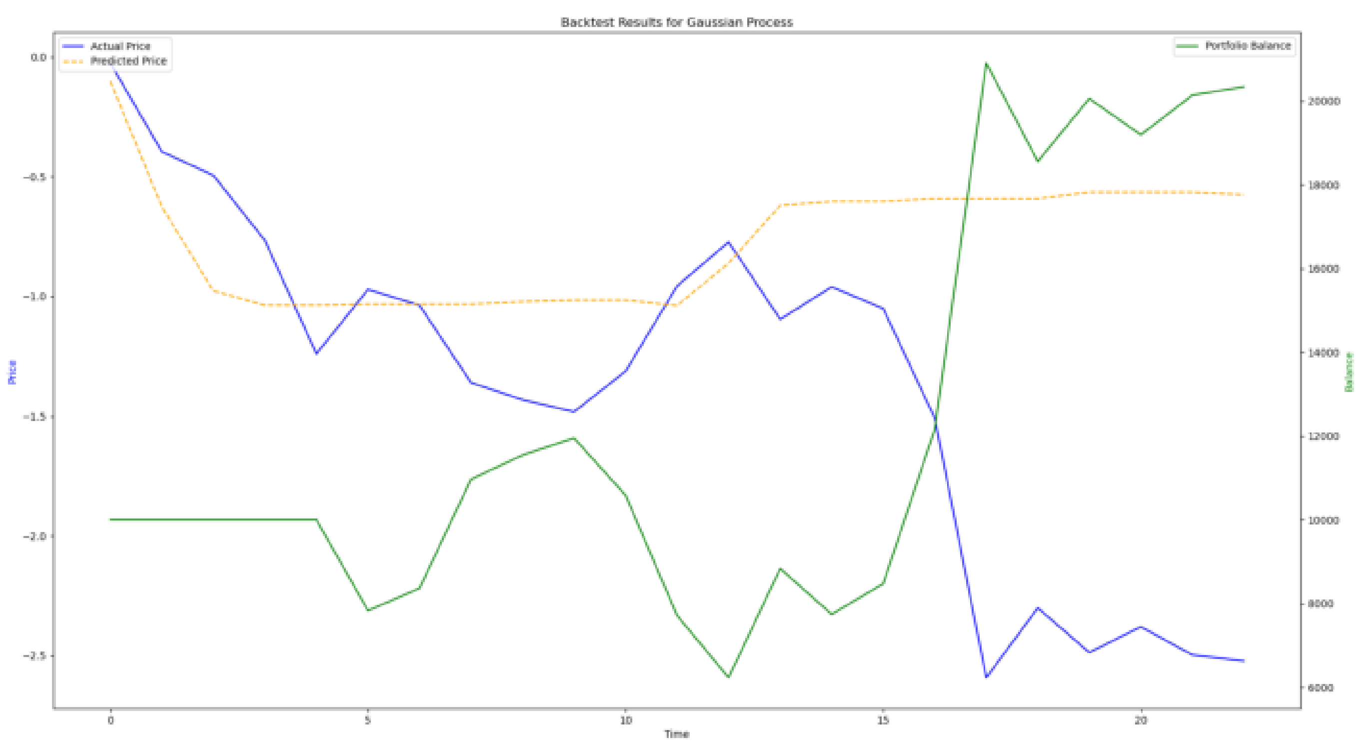
Backtest Results for Gaussian Process
Actual Price
Predicted Price
Portfolio Balance
Price
Balance
Time
0.0
−0.5
−1.0
−1.5
−2.0
−2.5
20000
18000
16000
14000
12000
10000
8000
6000
0
5
10
15
20

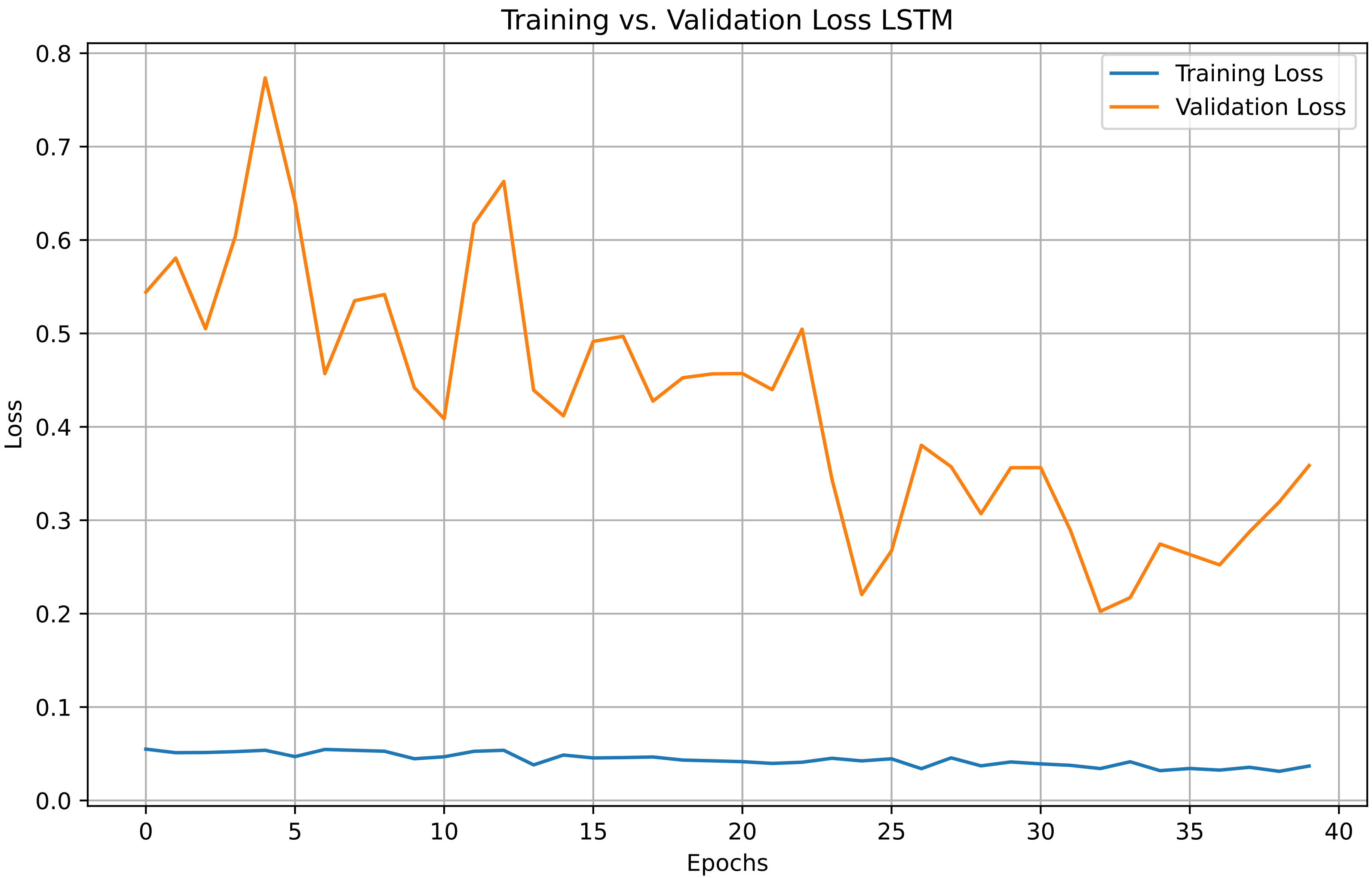
LSTM Backtest Results

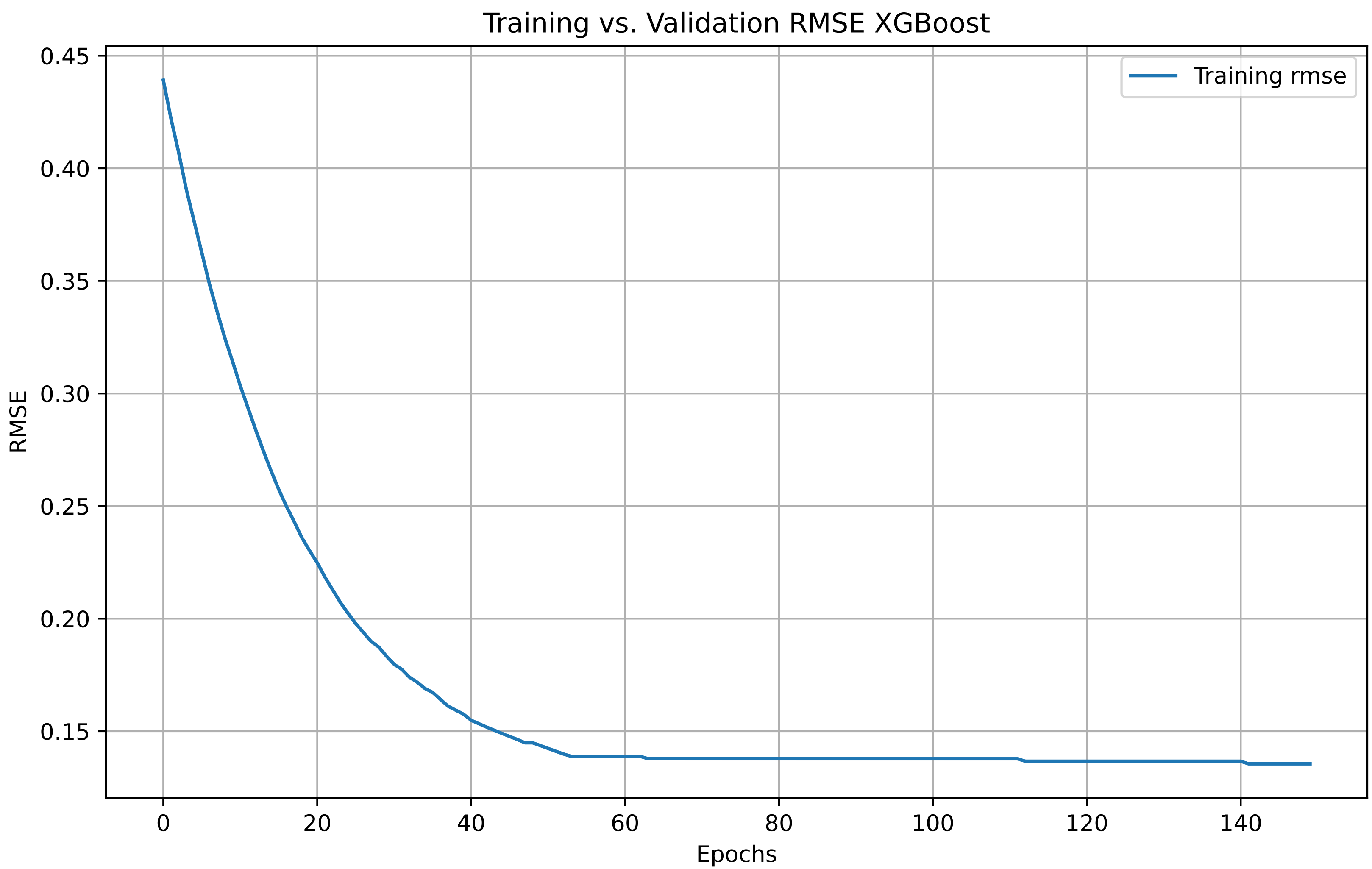


Gaussian Process Backtest Results

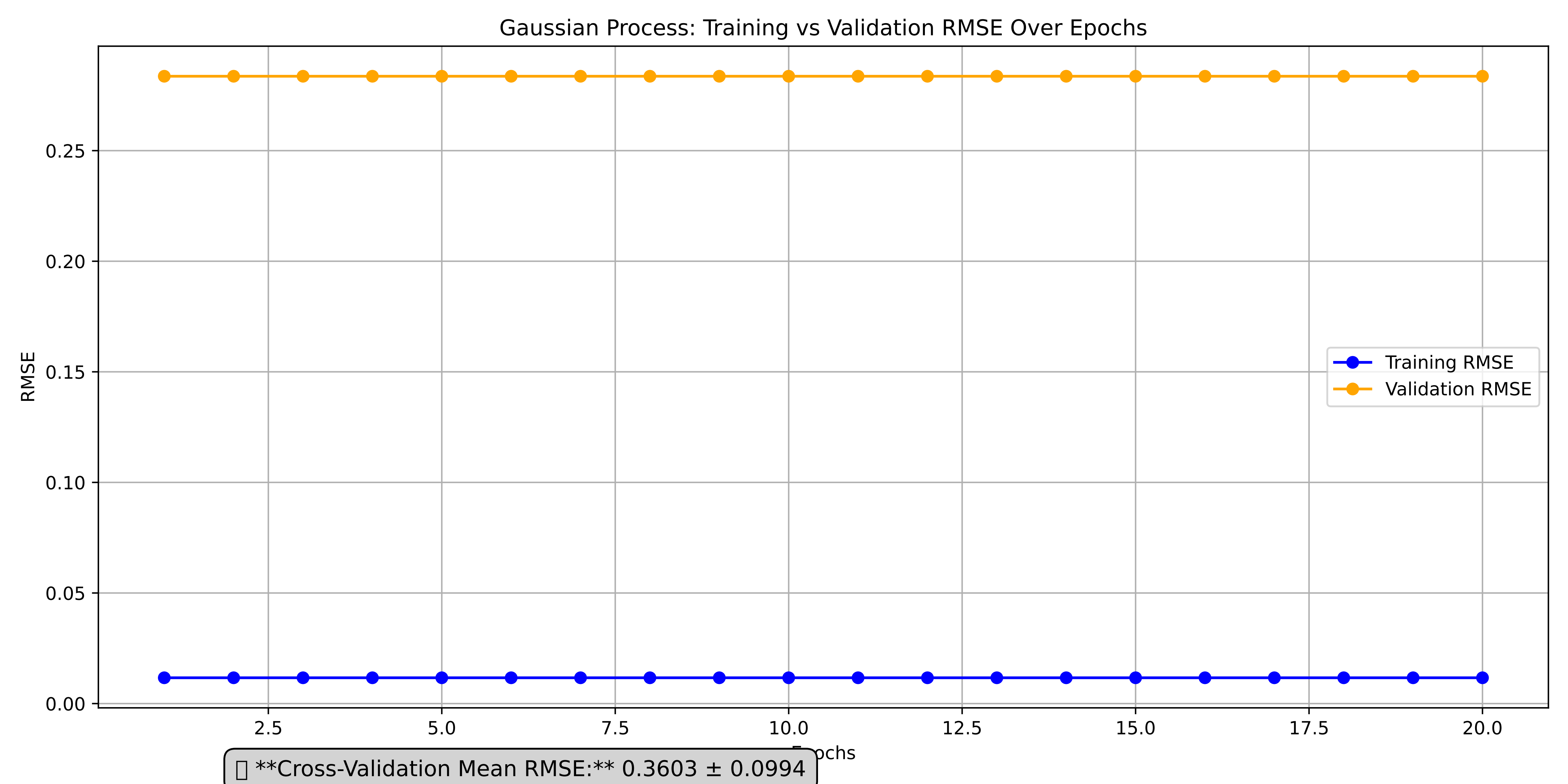





Training vs. Validation Loss LSTM
Training Loss
Validation Loss
Loss
Epochs
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0
5
10
15
20
25
30
35
40



Training vs. Validation RMSE XGBoost
Training rmse
RMSE
0.45
0.40
0.35
0.30
0.25
0.20
0.15
Epochs
0
20
40
60
80
100
120
140


Gaussian Process: Training vs Validation RMSE Over Epochs
RMSE
Epochs
0.00
0.05
0.10
0.15
0.20
0.25
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
Training RMSE
Validation RMSE
Cross-Validation Mean RMSE: 0.3603 ± 0.0994