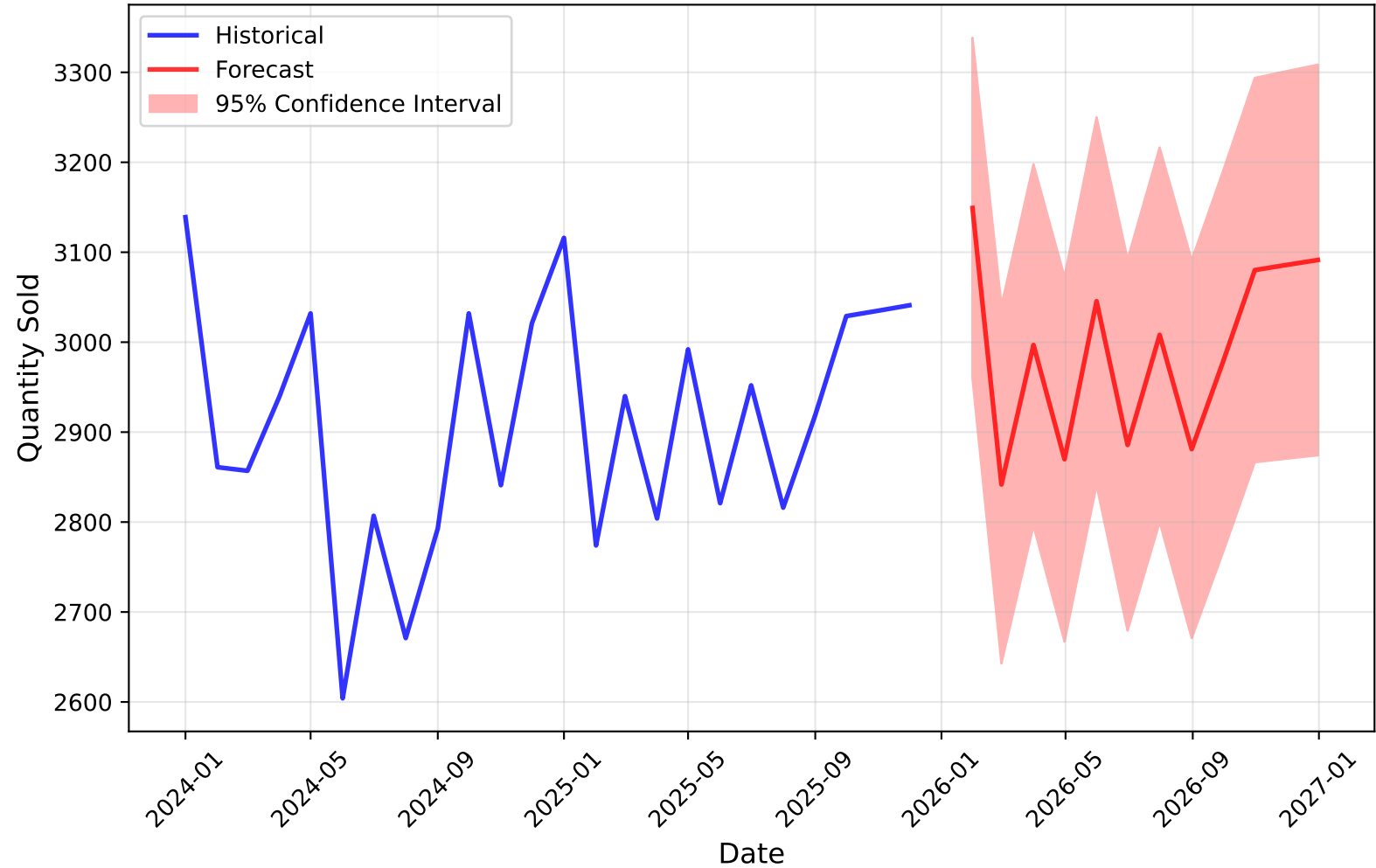


STEP 5.1: 12-Month Forecast
Historical Data + Future Predictions



STEP 5.2: Forecast Values

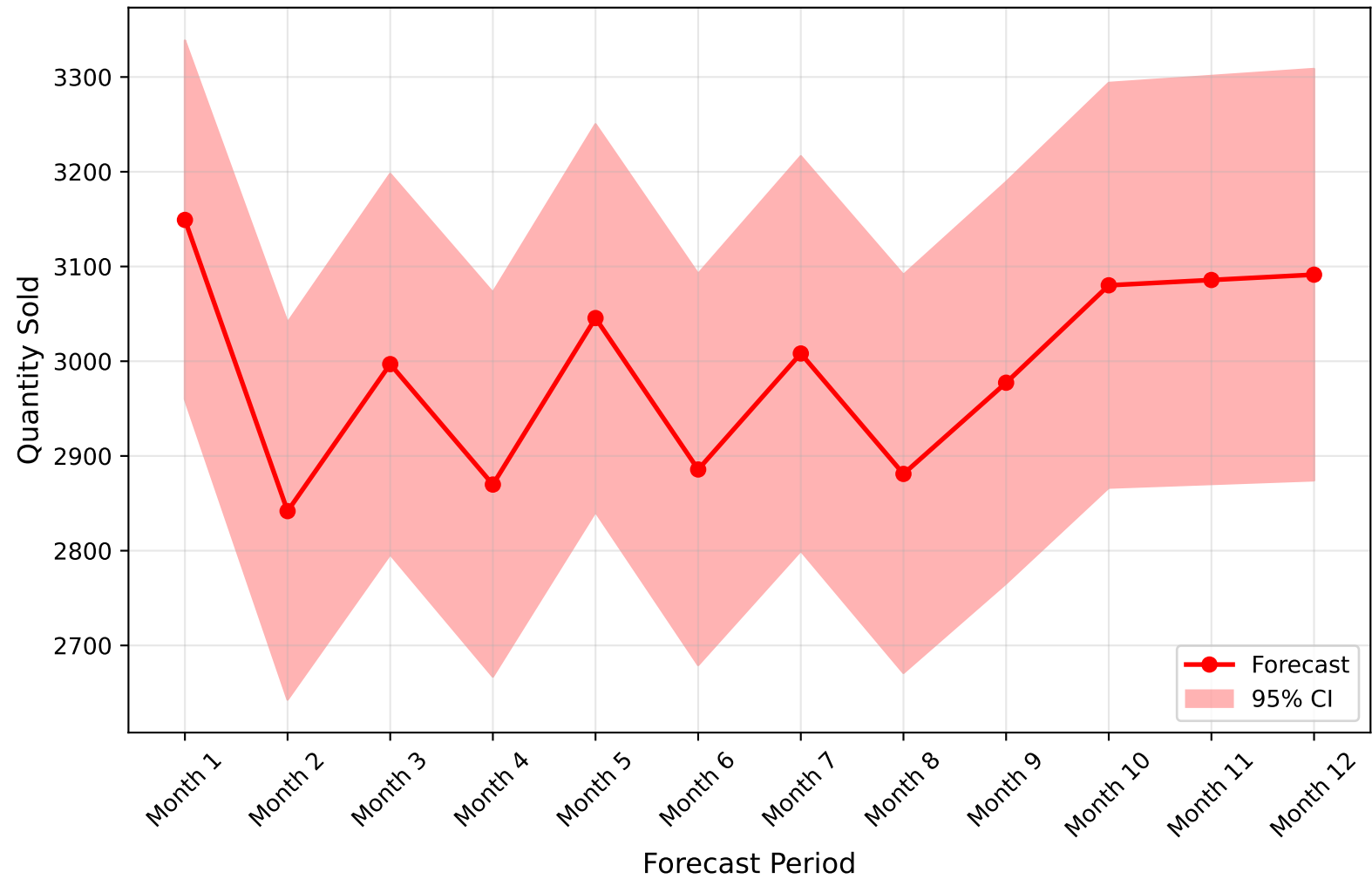
12-Month Forecast Values:

Month 1: 3149.2
Month 2: 2841.8
Month 3: 2996.9
Month 4: 2869.8
Month 5: 3045.6
Month 6: 2885.7
Month 7: 3008.2
Month 8: 2881.0
Month 9: 2977.3
Month 10: 3080.1
Month 11: 3085.8
Month 12: 3091.4

Forecast Statistics:

Mean: 2992.7
Std Dev: 98.2
Min: 2841.8
Max: 3149.2

STEP 5.3: Forecast with Confidence Intervals
Uncertainty Quantification



STEP 5.4: Forecast Interpretation

Forecast Analysis:

Trend Analysis:

- Decreasing trend over 12 months
- Change: -1.8%
- Average monthly change: -5.3 units

Seasonal Pattern:

- Peak month: Month 1 (3149.2 units)
- Trough month: Month 2 (2841.8 units)
- Seasonal variation: 10.3%

Confidence Intervals:

- 95% confidence range
- Lower bound: 2642.8 to 2959.9
- Upper bound: 3040.7 to 3338.5

Business Implications:

- Inventory planning for next 12 months
- Expected demand: 2993 units/month
- Peak demand: 3149 units (Month 1)
- Minimum demand: 2842 units (Month 2)