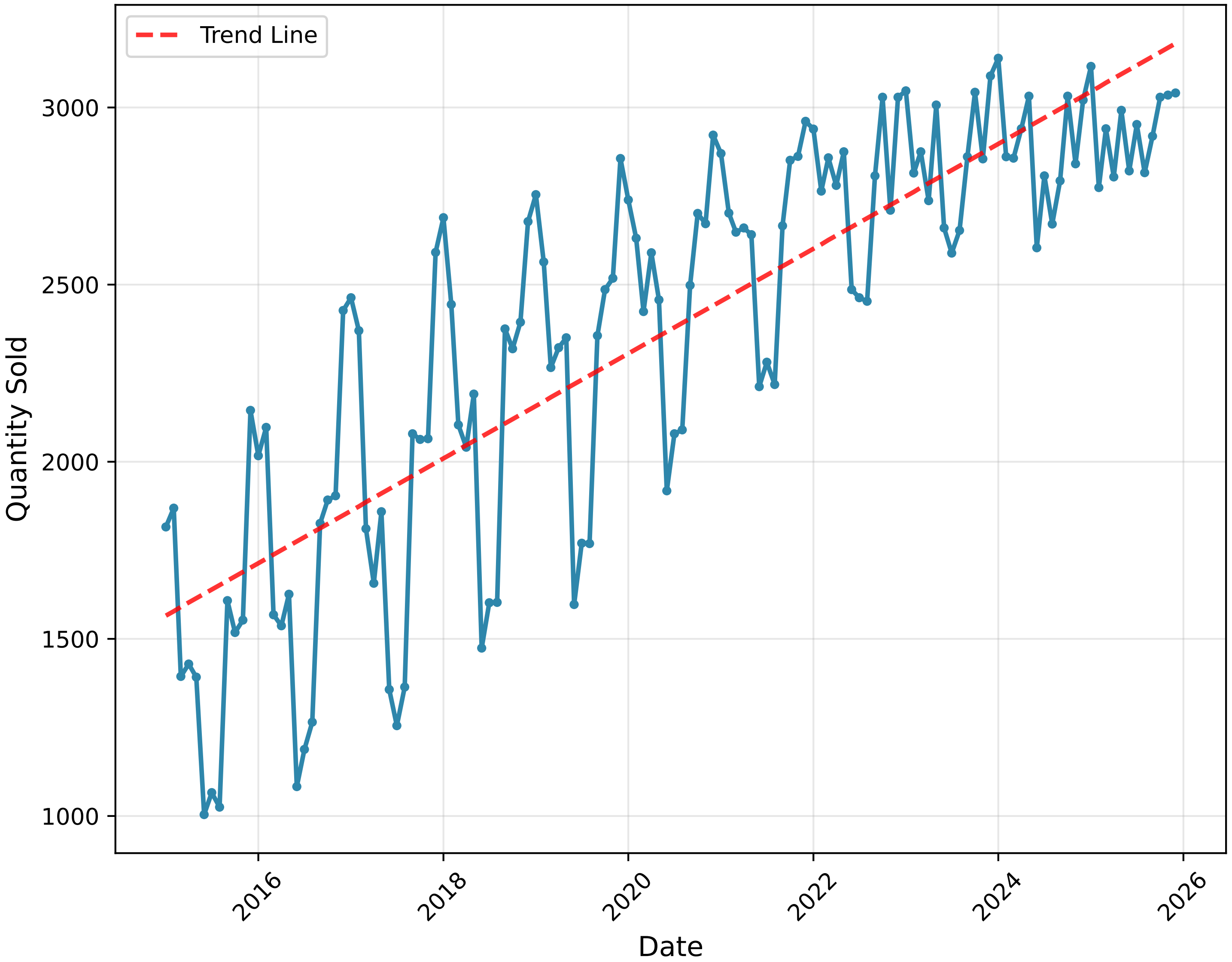
STEP 1.1: Original Time Series
Metformin 500mg Sales Data



STEP 1.2: Augmented Dickey-Fuller Test

ADF Statistic: -4.194667
p-value: 0.000673
Critical Values:
- 1%: -3.486535
- 5%: -2.886151
- 10%: -2.579896

Conclusion: STATIONARY
p-value ≤ 0.05

STEP 1.3: Data Statistics

```
Mean: 2373.17
Std Dev: 568.44
Min: 1004.00
Max: 3139.00
Range: 2135.00
Skewness: -0.736
Kurtosis: -0.561
Variance: 323120.63
```

STEP 1.4: Stationarity Analysis

What is Stationarity?
Stationarity means the statistical properties of a time series remain constant over time.

Key Properties:
• Mean remains constant
• Variance remains constant
• Autocorrelation structure remains constant

Why is it Important?
• ARIMA models require stationary data
• Non-stationary data needs differencing
• Ensures reliable forecasting

Our Results:
• Data is stationary
• Suitable for ARIMA modeling
• ADF test p-value: 0.000673