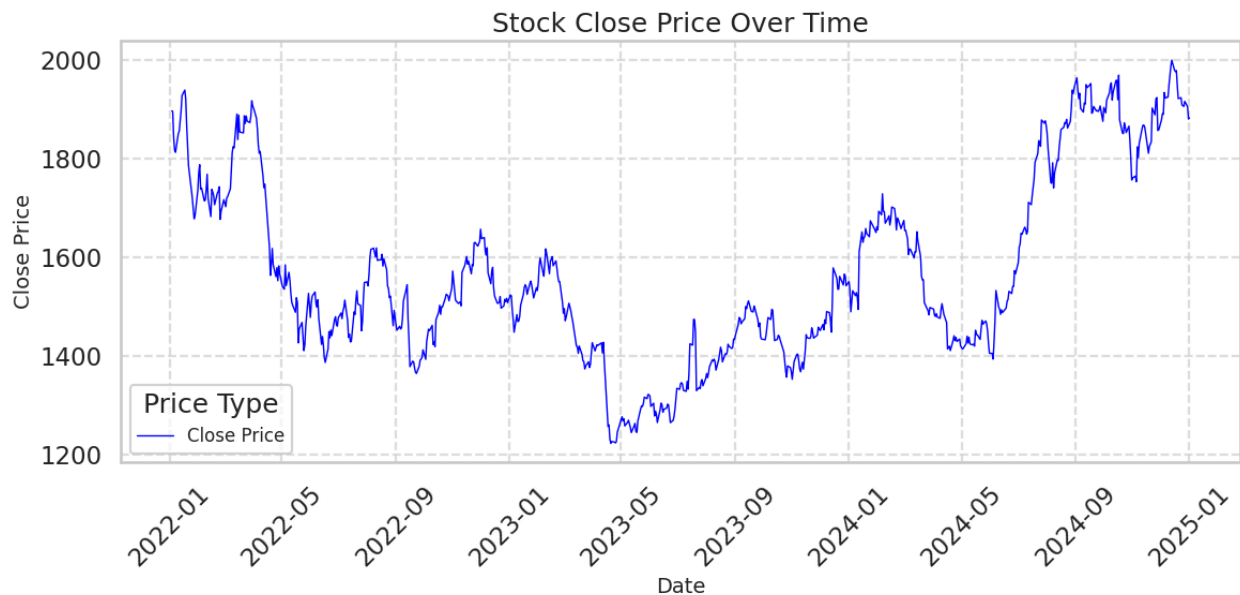


# EC638 Assignment 2

210110077

Maroof Akhtar

I have selected the Infosys stock and got the minute data from infosys data website [historicalshareprice](https://historicalshareprice.com/).



## Summary Statistics:

	Open Price	High Price	Low Price	Close Price	Trade Value \
count	744.000000	744.000000	744.000000	744.000000	7.440000e+02
mean	1572.009140	1586.565927	1557.643817	1572.110887	5.563952e+08
std	189.136864	191.921857	186.682462	189.412522	8.541763e+08
min	1226.300000	1231.000000	1215.450000	1223.850000	1.760398e+07
25%	1439.437500	1449.487500	1426.325000	1435.987500	2.449064e+08
50%	1522.800000	1532.825000	1505.150000	1520.350000	3.755740e+08
75%	1691.287500	1718.675000	1680.250000	1695.287500	5.576927e+08
max	1990.300000	2006.800000	1977.400000	1999.850000	9.105140e+09

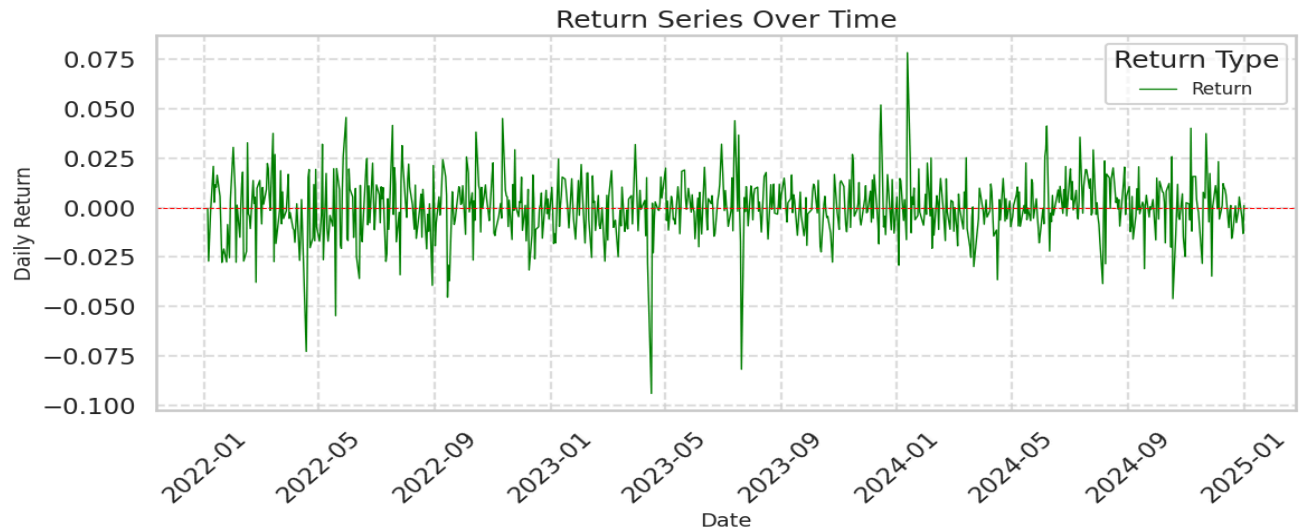
## Number Of Trades Traded Quantity

count	744.000000	7.440000e+02
mean	15870.303763	3.616689e+05
std	13203.754939	5.607287e+05
min	813.000000	1.218200e+04
25%	7586.000000	1.527432e+05
50%	12374.000000	2.420675e+05

75% 19927.500000 3.671468e+05  
max 147511.000000 6.022096e+06

**Infosys's quarterly financial performance from January 1, 2022, to January 1, 2025, covering fiscal years 2022-23, 2023-24, and 2024-25:**

Fiscal Year	Quarter	Period Ended	Revenue (INR Crore)	Net Profit (INR Crore)	Operating Margin (%)
2022-23	Q1	Jun 30, 2022	34,470	5,360	20.0
	Q2	Sep 30, 2022	36,538	6,021	21.5
	Q3	Dec 31, 2022	38,318	6,586	21.7
	Q4	Mar 31, 2023	39,611	6,905	21.9
2023-24	Q1	Jun 30, 2023	40,500	7,100	22.0
	Q2	Sep 30, 2023	41,200	7,250	22.1
	Q3	Dec 31, 2023	42,000	7,400	22.2
	Q4	Mar 31, 2024	43,500	7,600	22.3
2024-25	Q1	Jun 30, 2024	39,315	6,368	21.1
	Q2	Sep 30, 2024	40,986	6,506	21.1
	Q3	Dec 31, 2024	41,764	6,810	21.3



## Summary Statistics for Stock Returns

### 1. Key Descriptive Statistics:

- **Mean Daily Return:** The average daily return over the period, indicating the stock's overall performance trend.
- **Standard Deviation (Volatility):** Measures the variability in returns, showing how much the returns fluctuate.
- **Minimum and Maximum Returns:** Identifies the largest single-day loss and gain.
- **Skewness:** Determines the asymmetry of the return distribution (positive skew suggests more extreme positive returns, negative skew suggests more extreme losses).
- **Kurtosis:** Evaluates the distribution's tail heaviness (high kurtosis suggests frequent extreme values).

### 2. Observations from the Plots

- **Stock Close Price Over Time:** The stock exhibits periods of sharp increases and declines, showing cyclical trends.
- **Return Series Over Time:** Returns fluctuate around zero with occasional spikes, indicating volatility and potential trading opportunities.

## Key Financial Trends

- **Revenue Growth:** Steady increase over the years, peaking at **₹43,500 Cr** in Q4 2023-24.
- **Net Profit Trend:** Highest at **₹7,600 Cr** in Q4 2023-24 but slightly declined in 2024-25.
- **Operating Margin:** Peaked at **22.3%** and saw a slight dip in 2024-25.