

Identifying Investment Opportunities from Stock Market Trends

Task Objective

Use the given **stock market dataset** to uncover key investment opportunities by analyzing:

- Long-term trends
- Risk vs. reward
- Sector performance
- Stock volatility

You will use **Excel, MySQL, Power BI, and Tableau** to answer **critical business questions** and build visual reports that support investor decision-making.

1. Excel Analysis (Data Cleaning + Quick Stats)

- Which stocks had the highest **average return** over the past 3 months?
- Which sectors had the **most consistent performance** (lowest volatility)?
- Create a month-over-month summary table of:
 - Avg Return%
 - Total Traded Volume
 - Avg PE Ratio

2. SQL Analysis (Use MySQL)

- Show all data for stock 'TCS'
- List all unique stock names
- Get top 5 rows sorted by date (most recent first)
- Find stocks with volume greater than 1 million
- Get average closing price for each stock

- Get highest price ever recorded for each stock
- Get total traded volume per stock
- Find stocks that closed higher than they opened on a specific day
- Find the stock with the highest closing price each month
- Find days when stock price dropped ($\text{Close} < \text{Open}$)
- Find the percentage gain/loss per stock

3. Power BI Dashboard (Executive View)

- Visuals to include:
 - KPI Cards: Best Performer, Most Stable Stock, Highest Volume
 - Sector-wise performance heatmap
 - Volatility vs. Return scatterplot
 - Filters: Sector, Time Period, Ticker
 - Optional: Use decomposition tree or drill-through

4. Tableau Story (Investor Pitch Deck)

- Create a 4-slide story:
 - Slide 1: Market Overview (trends, top sectors)
 - Slide 2: High-Risk vs. Low-Risk Investment Options
 - Slide 3: Key Stocks to Watch (return, volatility, growth potential)
 - Slide 4: Final Recommendation + Investor Strategy

Deliverables

- Cleaned Excel File
- MySQL Query Output or Script
- Power BI Report (.pbix)
- Tableau Story (.twbx)
- Final Recommendation Report (1–2 pages)