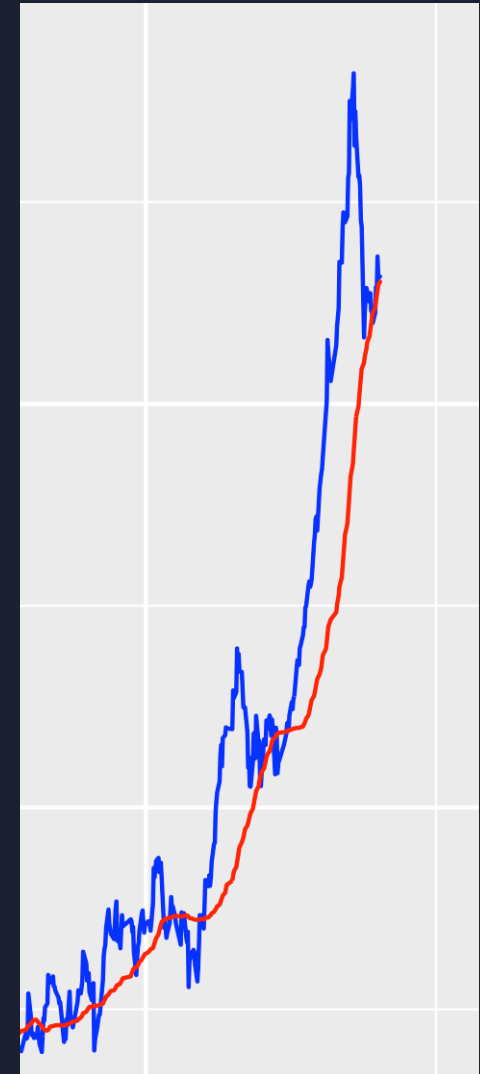# NIFTY 100 STOCKS

By: Marwan Lloyd, Max Schleck, Skylar Shafer, Rachel Studer, James Wan

DATASET

- Nifty 100, a set of stocks in India, including the Nifty 50

- Time of data collection ranges from 2015 to 2021

- 60 Columns, minute by minute data

  - For analysis, we used the standard stock information columns and constructed several day values from those
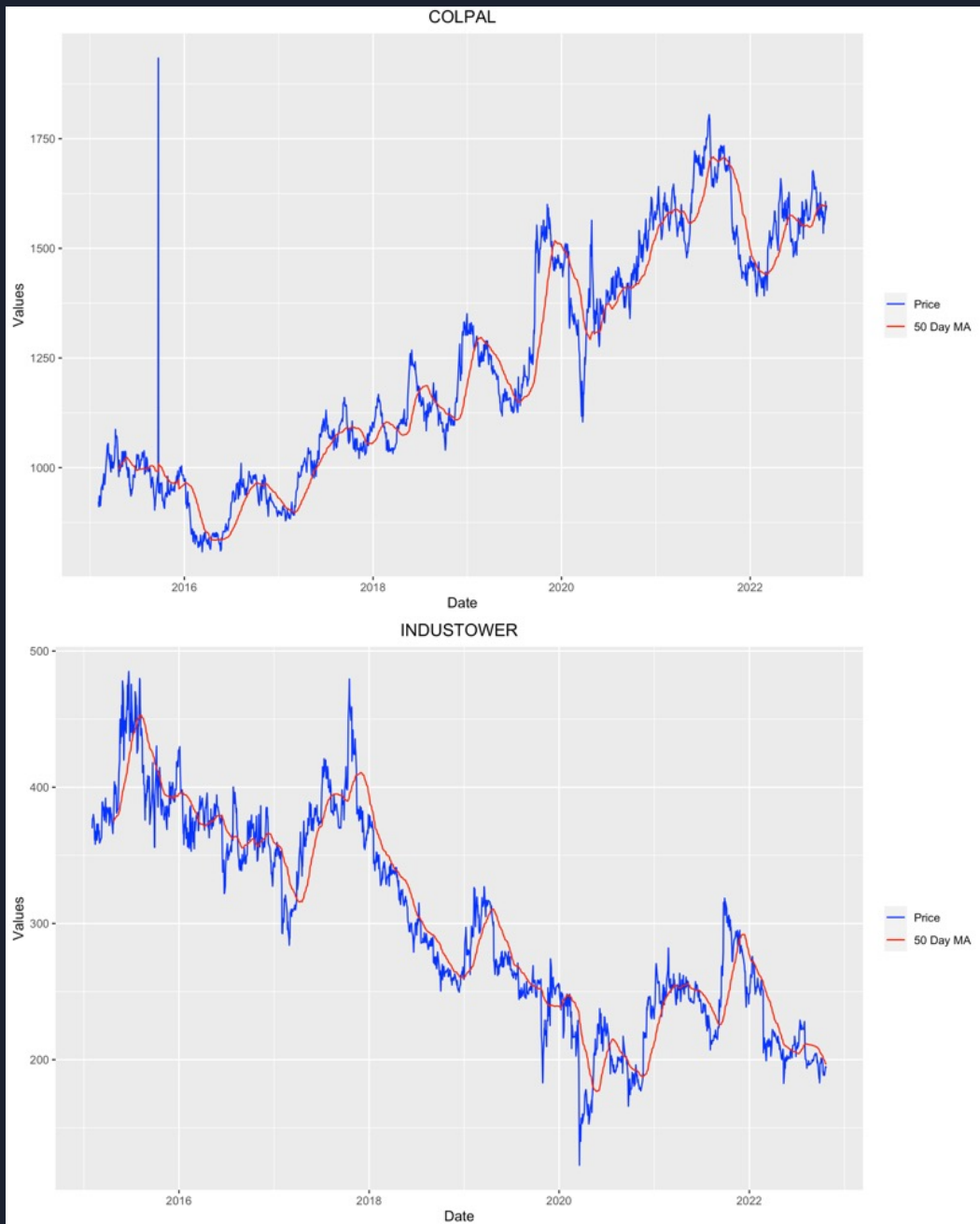
DATA HANDLING

- Reduced to day-by-day data

- Day Open, and Day Close

- 50 Day Moving Average

- List of duration periods in which the stock price was above 50-day MA for more than 2 days in a row

PARALLEL PROCESSING

- 100 jobs

- Ran for 24 min each

- 3.31 MB of Memory

- 1.14 GB of Disk space

ANALYSIS

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- All Medians = 5

- Largest Mean = 4.55

- 7 of the stocks were shown to be stationary by the Augmented-Dickey Fuller Test $(p < 0.05)$

- Trends appear to exist, as seen to the right comparison of MA and raw stock prices

CONCLUSION

- From our analysis, we conclude that the movement of stock prices is **not random.**

- The stocks that were "mathematically stationary" did not pass the human eye test.

- The industry standard 50-day MA is accurate even down to the minute level.