

# HISTORICAL STOCK MARKET ANALYSIS

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## **Abstract:**

*This historical stock market analysis project focuses on analyzing the performance and trends of Microsoft, Apple, Amazon, Netflix, and Google. By examining their stock price movements over a specific time period, this study aims to provide valuable insights into the historical performance, volatility, and investment potential of these technology giants. The project utilizes a range of financial and statistical tools to assess the historical stock data of Microsoft, Apple, Amazon, Netflix, and Google. It includes the calculation of key metrics such as returns, volatility, and correlation coefficients to quantify the risk and return characteristics of each stock.*

**Keywords:** Data Analysis, Historical Analysis, Cleansing Data

## ***I. Introduction***

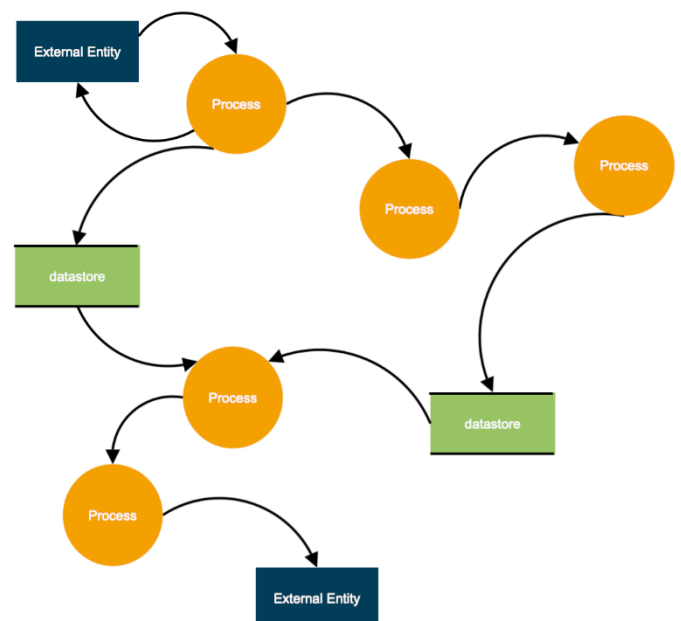
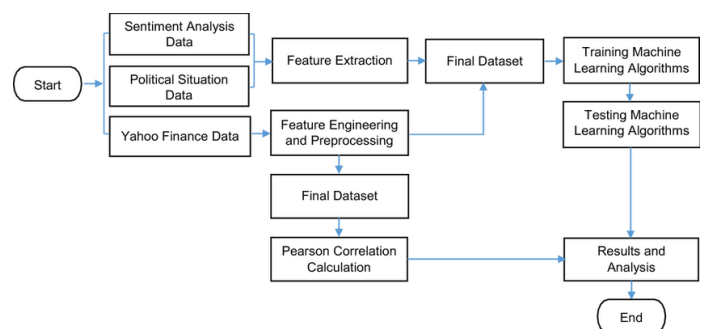
The stock market has long been a dynamic and ever-evolving landscape, influenced by a myriad of factors ranging from economic conditions to technological advancements. In this context, the performance and trends of major technology companies have played a significant role in shaping investor sentiment and driving market movements. Among these technology giants, Microsoft, Apple, Amazon, Netflix, and Google stand out as leaders, with their stocks garnering immense attention from investors and analysts alike. This historical stock market analysis project aims to delve into the performance and trends of Microsoft, Apple, Amazon, Netflix, and Google stocks over a specific time period. By examining the historical data of these companies, we seek to provide valuable insights into their stock price movements, volatility, and investment potential. The technology sector has witnessed tremendous growth and innovation in recent years, with Microsoft, Apple, Amazon, Netflix, and Google at the forefront of this transformation.

## ***II. Methodology***

The free-float methodology is a method of calculating the market capitalization of a stock market index's underlying companies. With the free-float methodology, market capitalization is calculated by taking the equity's price and multiplying it by the number of shares readily available in the market.

To conduct the stock market analysis of Microsoft, Amazon, Apple, Netflix, and Google, the following methodology will be employed:

- Data Collection
- Financial Analysis
- Comparative Analysis
- Historical Performance Evaluation
- Industry and Market Analysis



## HARDWARE REQUIREMENTS

- Windows 8.1 or Windows Server 2012 R2 or later
- Microsoft Edge browser (Internet Explorer is no longer supported)
- Memory (RAM): At least 2 GB available, 4 GB or more recommended
- Display: At least 1440x900 or 1600x900 (16:9) required

## SOFTWARE REQUIREMENTS

### PYTHON

One of the main reasons why Data Analytics using Python has become the most preferred and popular mode of data analysis is that it provides a range of libraries.

**NumPy:** NumPy supports n-dimensional arrays and provides numerical computing tools. It is useful for Linear algebra and Fourier transform.

### POWER BI

Power BI is a cloud-based analysis service that provides rapid insight and is used to extract and visualise data. Power BI brings together data from multiple sources to give you a comprehensive view of your company's information assets.

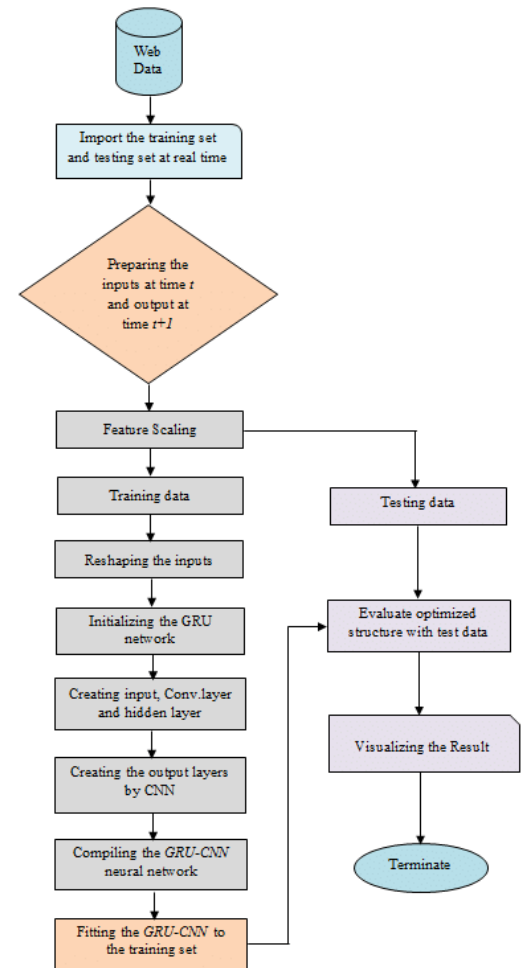


Figure 1: System Architecture

### III. Software Requirements

The software part in the system is again divided in three subparts:-

- 1.The primary interface for building the user interface: **Tkinter**.
- 2.The programming language for backend development system logic : **Python**.
- 3.A database management system for storing user details and ride information: **MySQLite**.

#### III.1 Functional Requirements

- 1.User registration-Allow user to register an account with the system.
- 2.Login and Authentication- provide secure login and authentication for drivers and customers.
- 3.Taxi booking-allow customer to book taxi using system.

#### III.2 Non-Functional Requirements

This system have an user-friendly interface.It ensure fast response time and strong security measures to prevent user details.

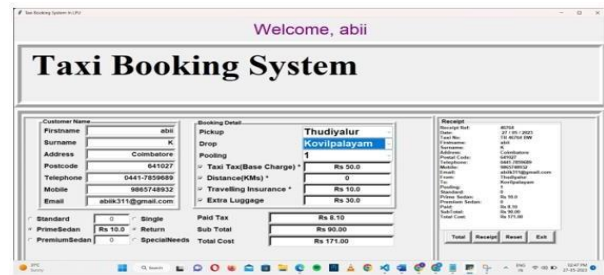


Figure 4: User Interface

### IV. Results



Figure 2: Sign in

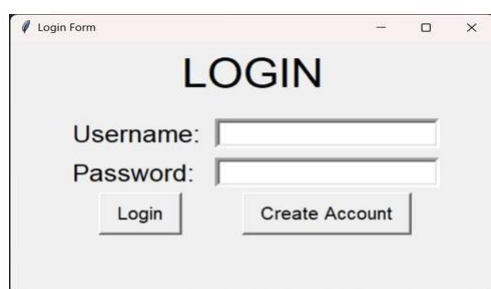


Figure 3: Login

### V. Conclusion

A taxi management system plays a crucial role in optimizing operations and improving the overall efficiency of taxi fleets. By automating processes such as ride booking and dispatching, driver management, vehicle tracking, and fare management, the system streamlines operations, reduces costs, and enhances customer satisfaction. It provides real-time data insights and analytics, enabling data-driven decision-making for fleet operators. The system's integration with external services and platforms expands its functionality and provides a seamless experience for both customers and drivers.

### VI. Acknowledgement

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### *Refrencence*

1. “Design and Implementation of Taxi Management System” by Yueming Peng, Shanshan Liu, Xinglong Dai, an intelligent taxi dispatch system that uses real-time data to predict demand and optimize taxi routes.
2. “Research on the optimization of allocating resources of urban taxi based on decision analysis model” by Weiyu Chen, Haochi Wu, Zhen Wang, Jialven Huang, ring Jiang, Jing Zhang, Lingxuan Zhu, depecting adecision analysis on taxi management.
3. “A Service Choice Model for optimimizing Taxi Service Delivery” by Shih-Fen Cheng and Xin Qu. It describes Proposeto leverage on infrastructure and build a service choice model that helps individual drivers.