StockSavvy

A User-Friendly Stock Market Solution

McMaster University
ENGINEERING

Key Benefits

- Simplifies stock market investing
- Empowers investors with data-driven insights using Machine Learning algorithms and statistical data
- Saves time and effort by automating market research and analysis
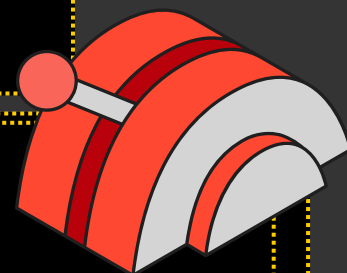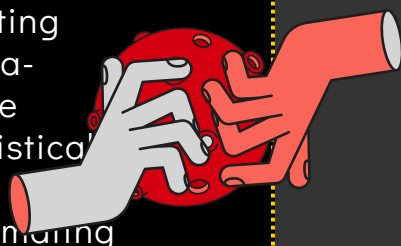
Component Diagram
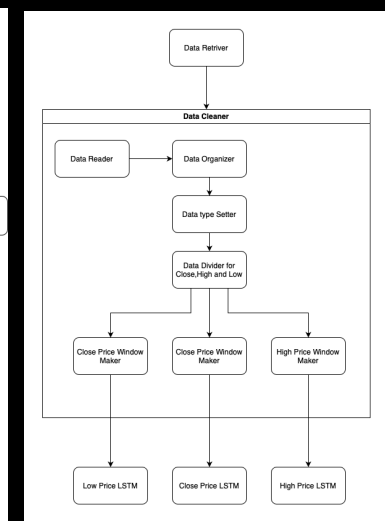
Motivation

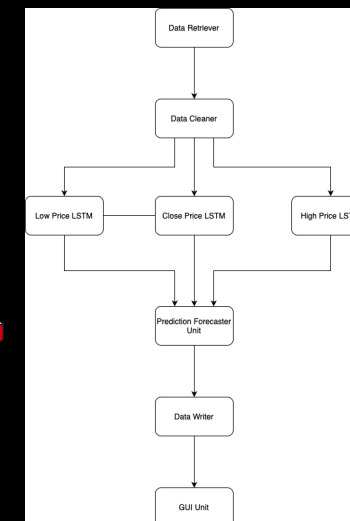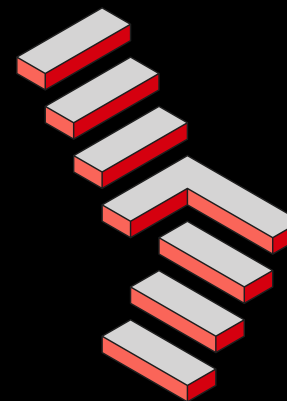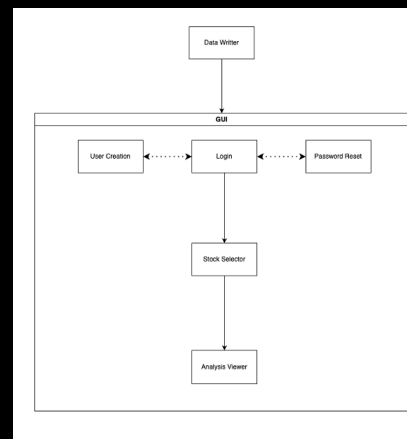StockSavvy is a user-friendly stock market solution that simplifies the investment process for investors of all levels. It aims to democratize finance by providing data-driven insights and advanced financial tools, empowering individuals to make informed investment decisions efficiently.

Key Features

- Historical Data Analysis: Providing users with comprehensive historical data on stock prices, trading volumes, and other key metrics.
- Predictive Analysis using Machine Learning: Employing LSTM models to forecast future stock prices with a target validation accuracy of over 75%.
- Statistical Analysis: Offering statistical insights, such as moving averages and volatility, to complement the machine learning predictions.
- User-Friendly GUI: Designing an intuitive and visually appealing desktop interface to simplify stock market analysis for investors.
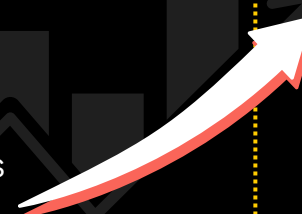
Tools Used

- Python: The primary programming language for the project.
- Tkinter: Used for developing the desktop GUI.
- TensorFlow: Machine learning libraries for model development.
- NumPy and Matplotlib: Data manipulation and visualization tools.
- yfinance library: retrieving stock data, to ensure efficiency and reduce development time.
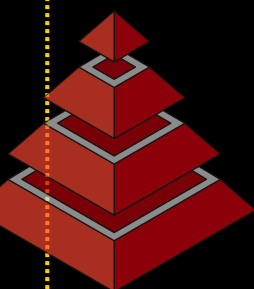
Our Team

Jaskaran Singh
Testing Specialist

Hosty Khurana
User Interface Lead

Shubham Ahuja
Lead Developer and ML Engineer