

STOCK PRICE PREDICTION APP



GROUP MEMBERS

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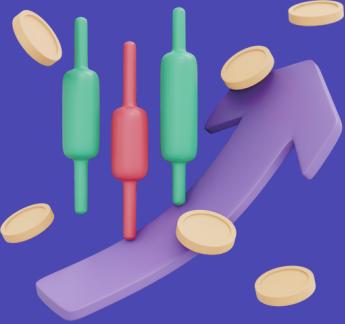
PROBLEM STATEMENT

Many investors face financial losses due to irrational decisions caused by declining stock prices. To address this, a machine learning model is proposed to predict stock prices and assist investors in making informed investment decisions. Accurate stock price predictions can increase the chances of making a profit. .The model, deployed in a mobile application, is particularly helpful for beginner investors, reducing the risk of financial loss and increasing profit chances.

COMPETITION IN MARKET



- Investment apps like Groww, Zerodha, and Upstocks are popular but only display past performance data of a stock.
- Relying solely on past performance can lead to wrong investment decisions and loss of money.
- Our app predicts future stock prices using advanced algorithms, reducing the chances of losing money.
- Our app's prediction feature considers various factors like financials, market trends, and news events.
- Investors can make better decisions and adjust their strategy using our app, leading to better long-term outcomes.

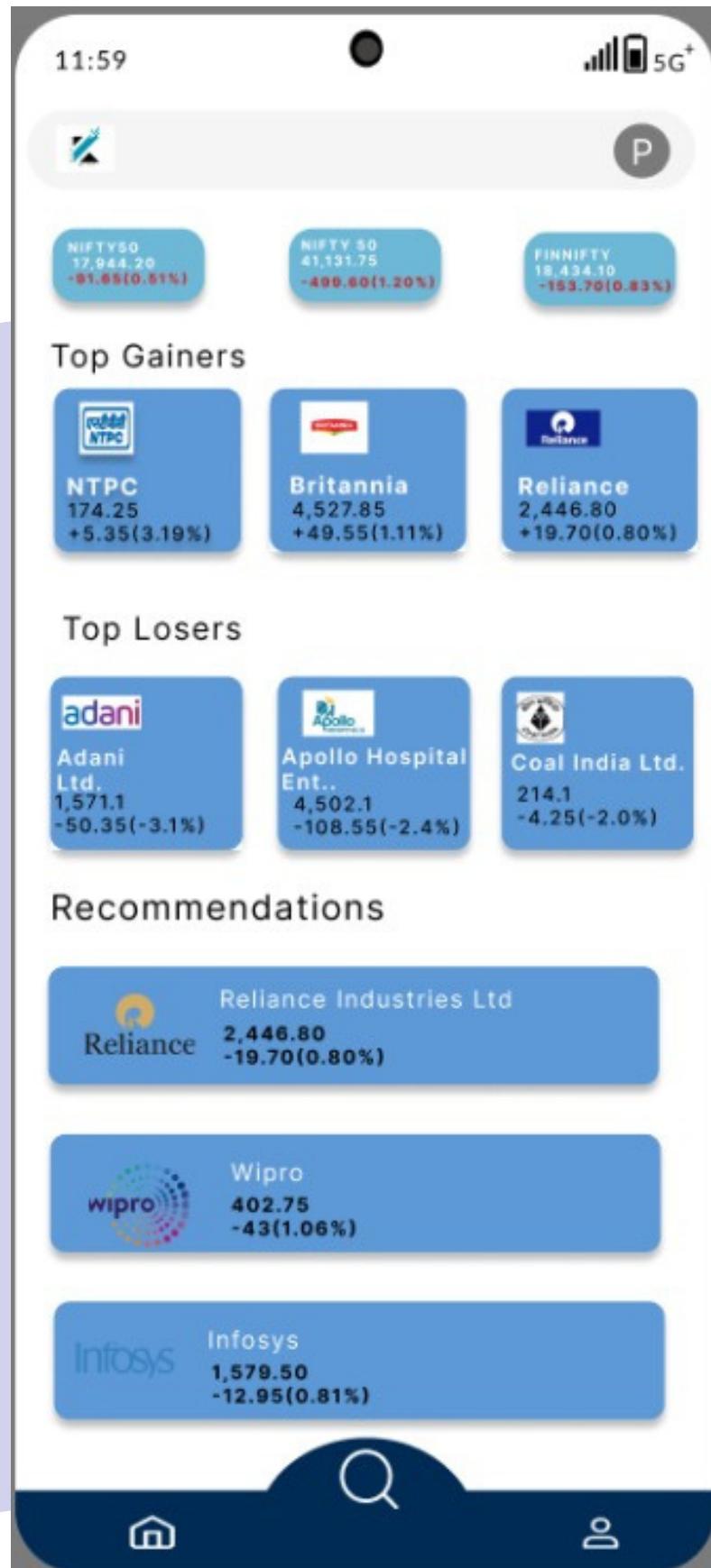


METHODOLOGY



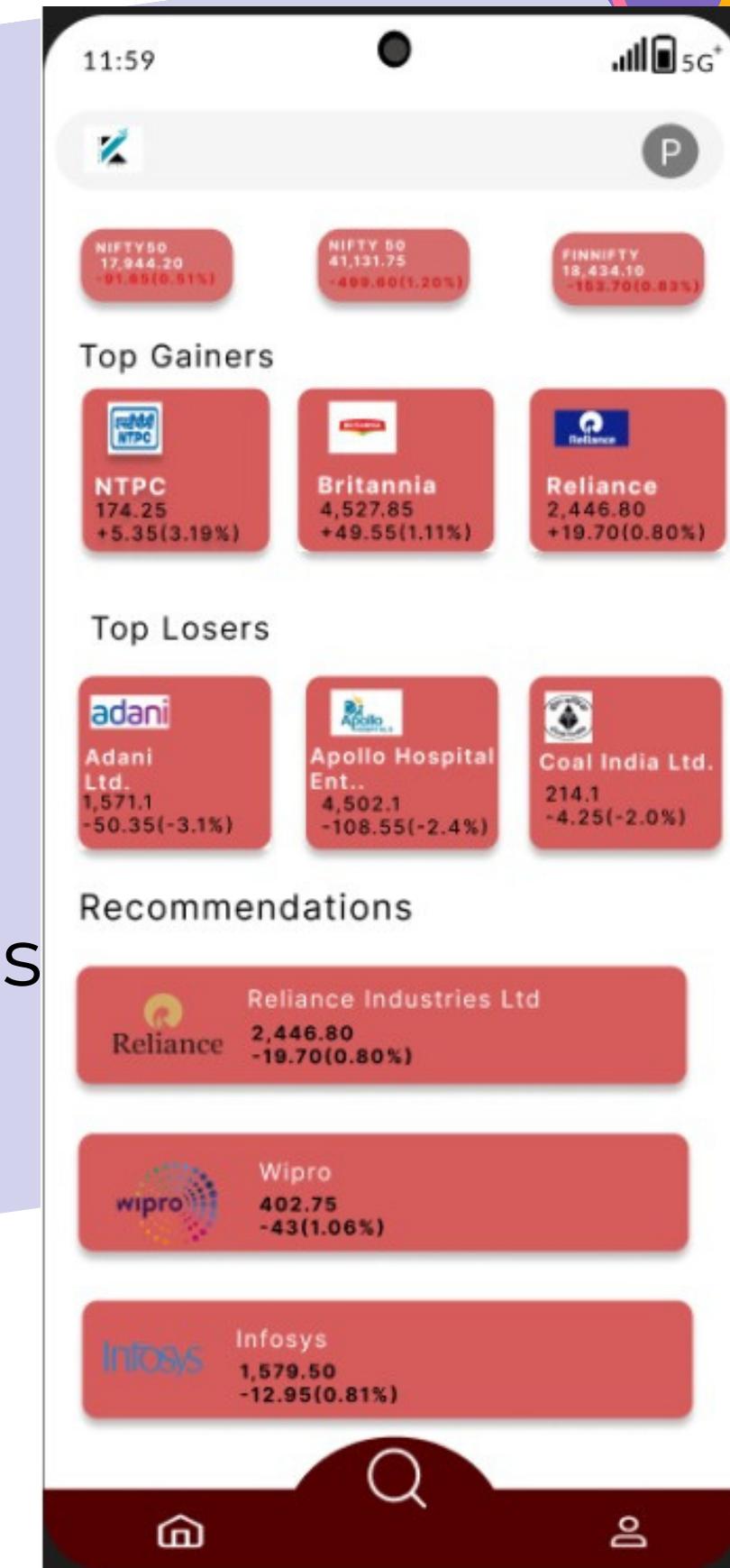
- Conducted background research about stocks and stock market and existing stock predicting solutions.
 - Brainstorming the design and usability ideas we can add to our stock predicting app.
 - Selected API from many financial markets and economic indicators. The data is refined under specific protocols and added into final database.
 - After successfully preparing the data machine learning algorithms are implemented and API is connected to the model.
 - After the model is completed we trained the model using past collected data to increase its precision and accuracy.
 - Focused our attention on the main app development and tried to make it more user friendly and also conducted surveys to understand the mindset of the user.
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A/B TESTING



79% of the users liked this

Results



21% of the users liked this

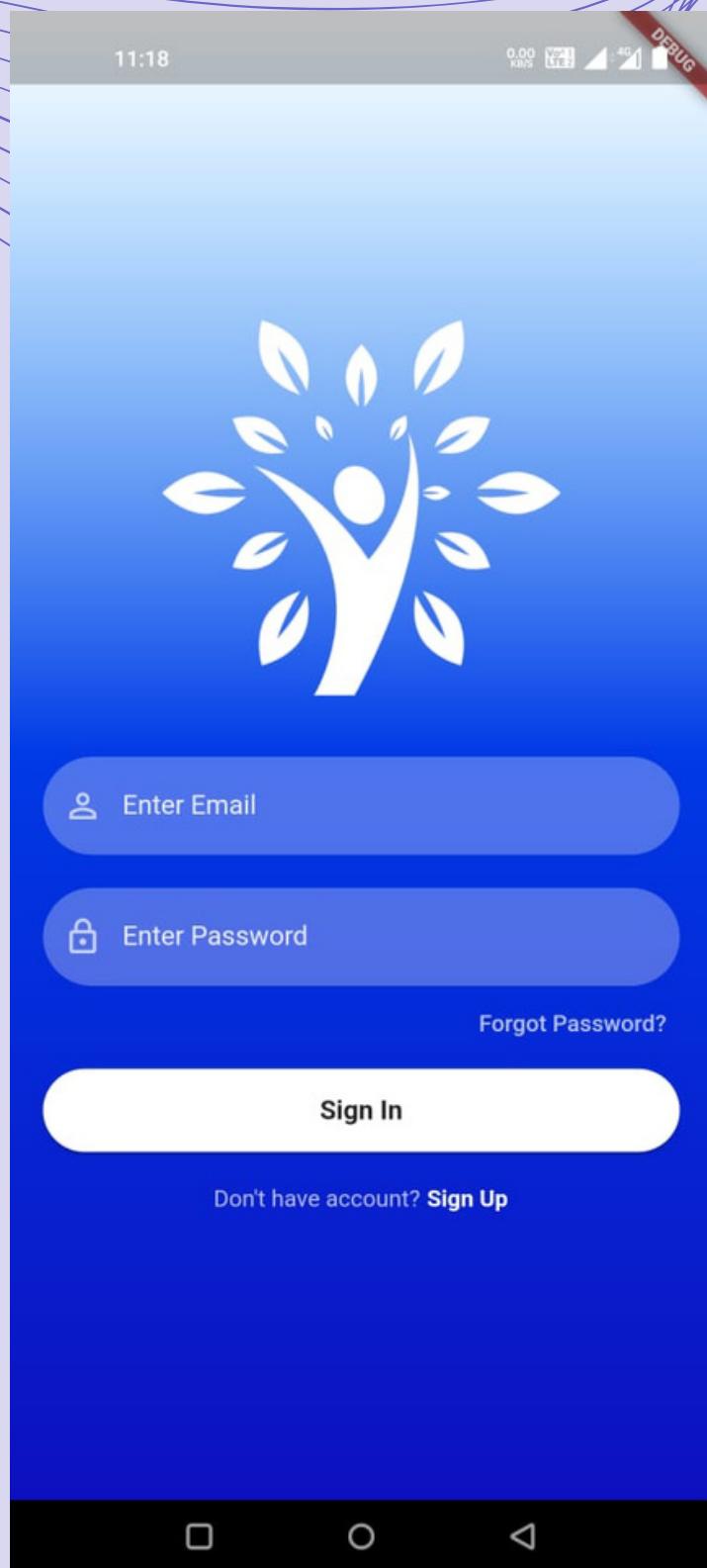
RESULTS



MODEL	DESCRIPTION	R-SQUARED VALUE
LINEAR REGRESSION	Linear regression is a statistical method used to model the relationship between a dependent variable and one or more independent variables.	0.0433
ARIMA	A statistical analysis model that uses time series data to either better understand the data set or to predict future trends	0.889

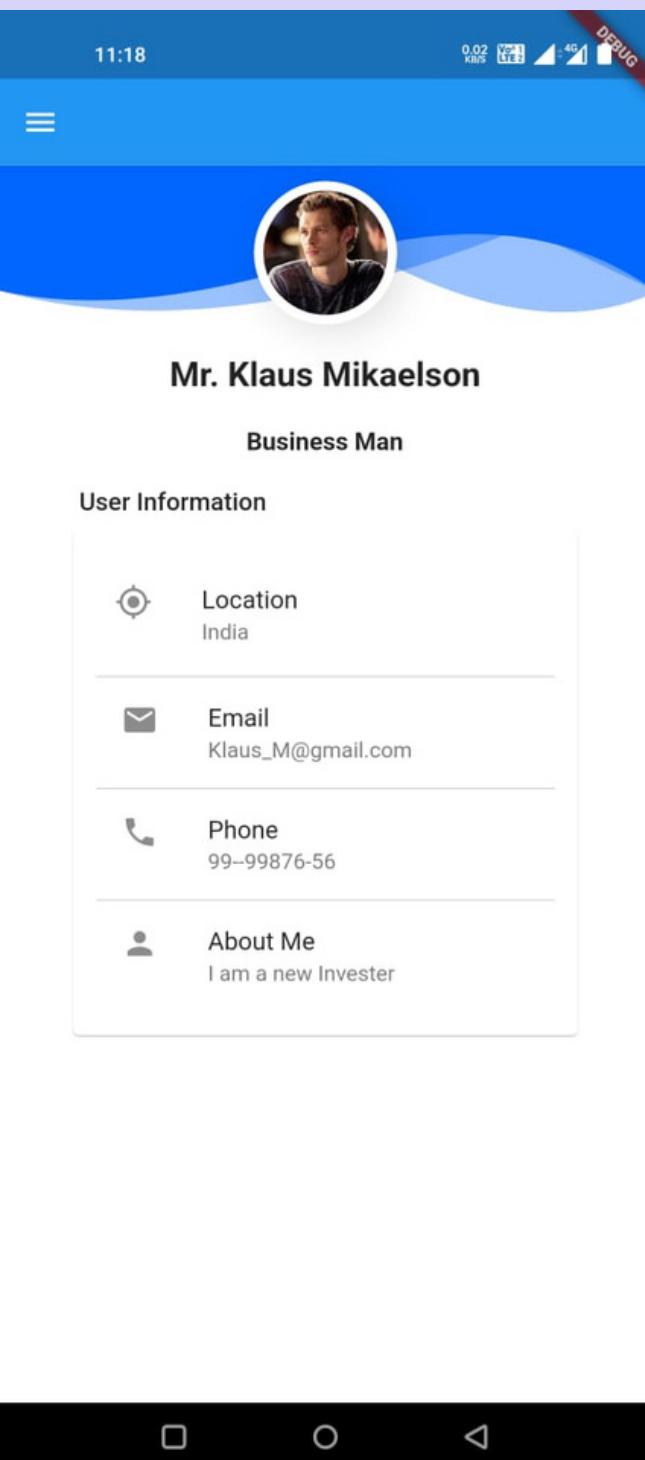
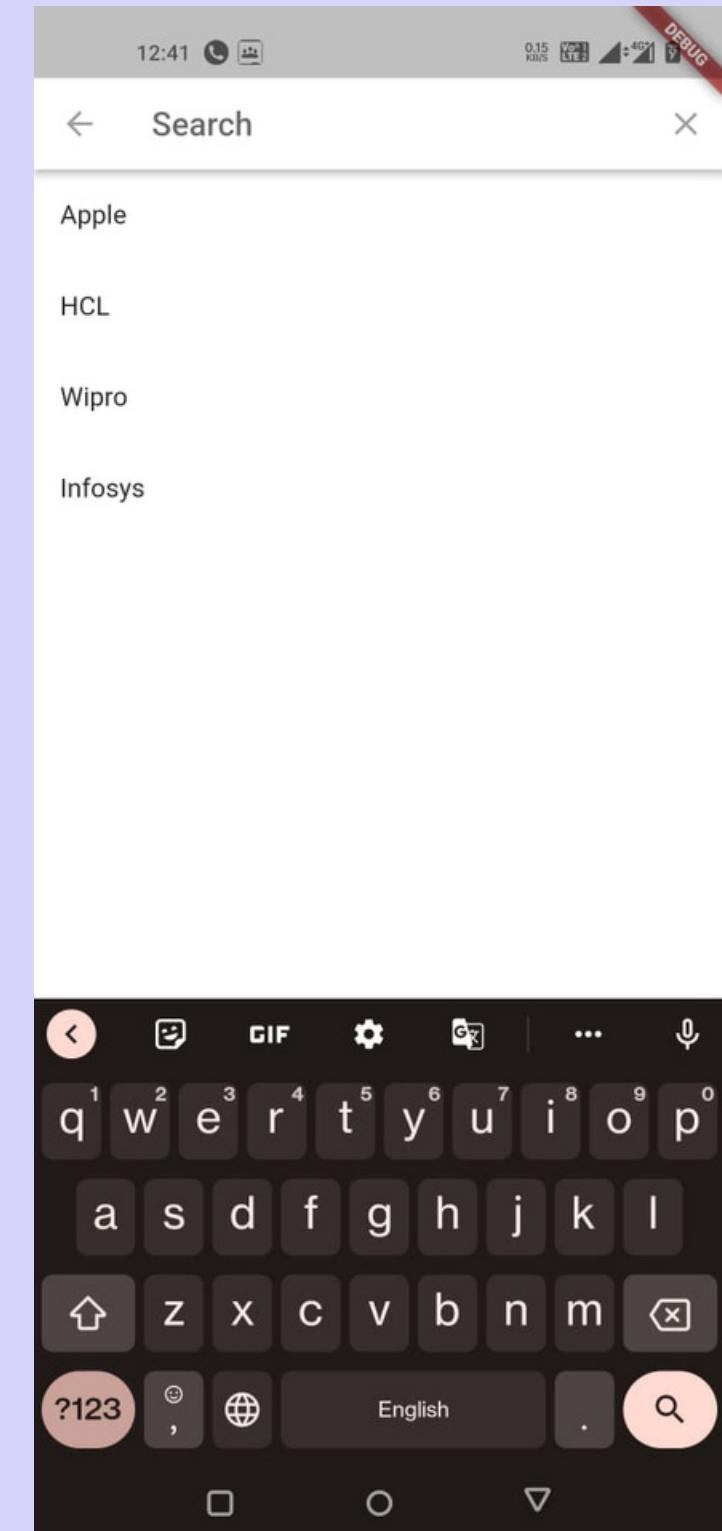
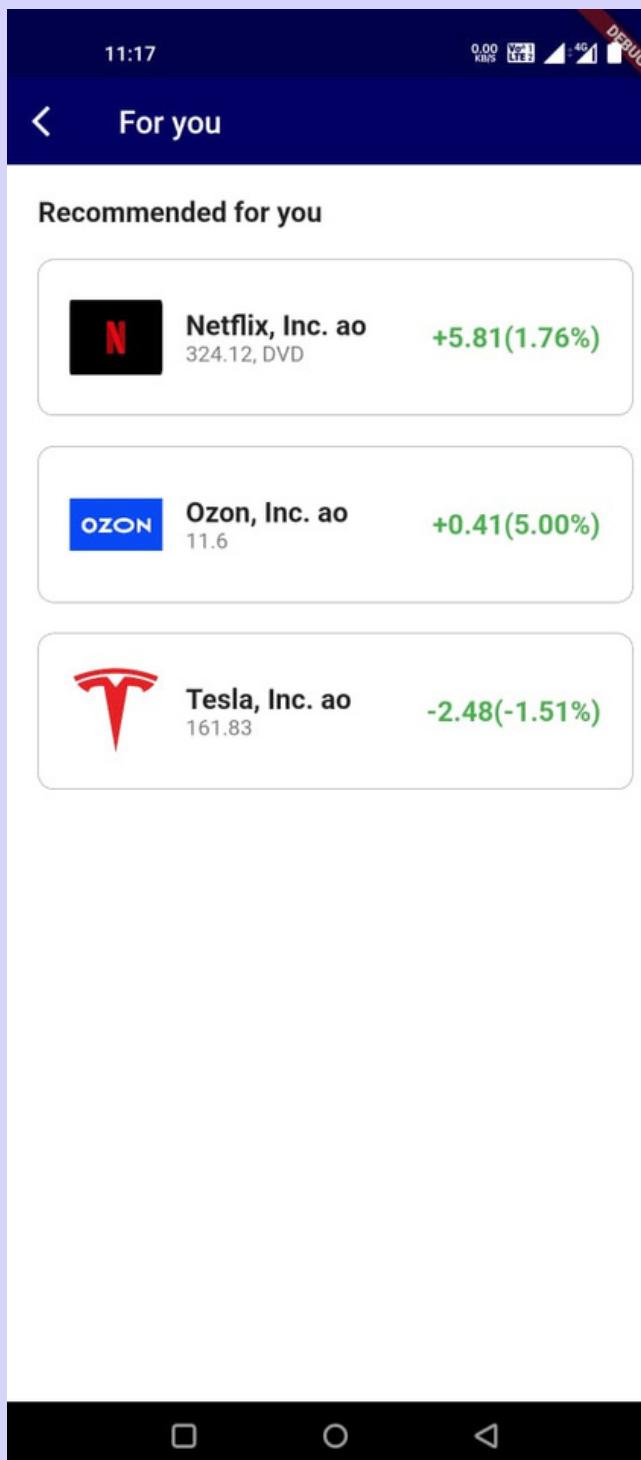
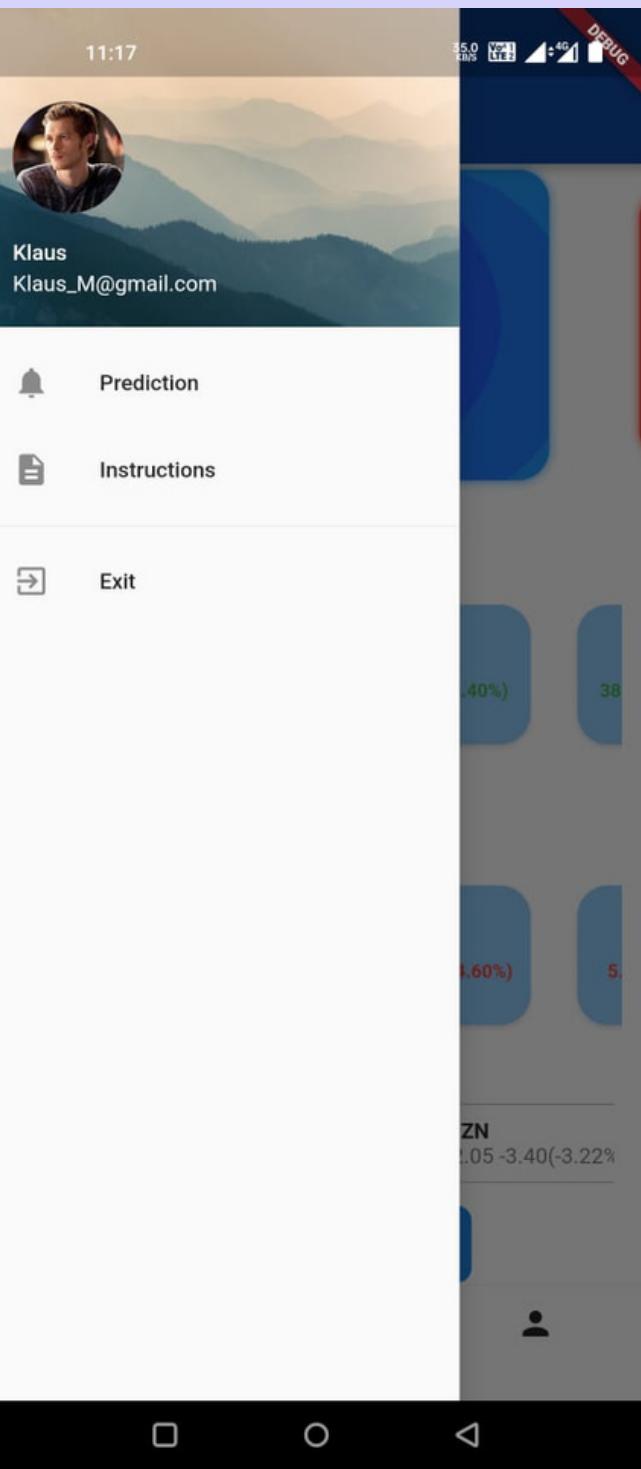
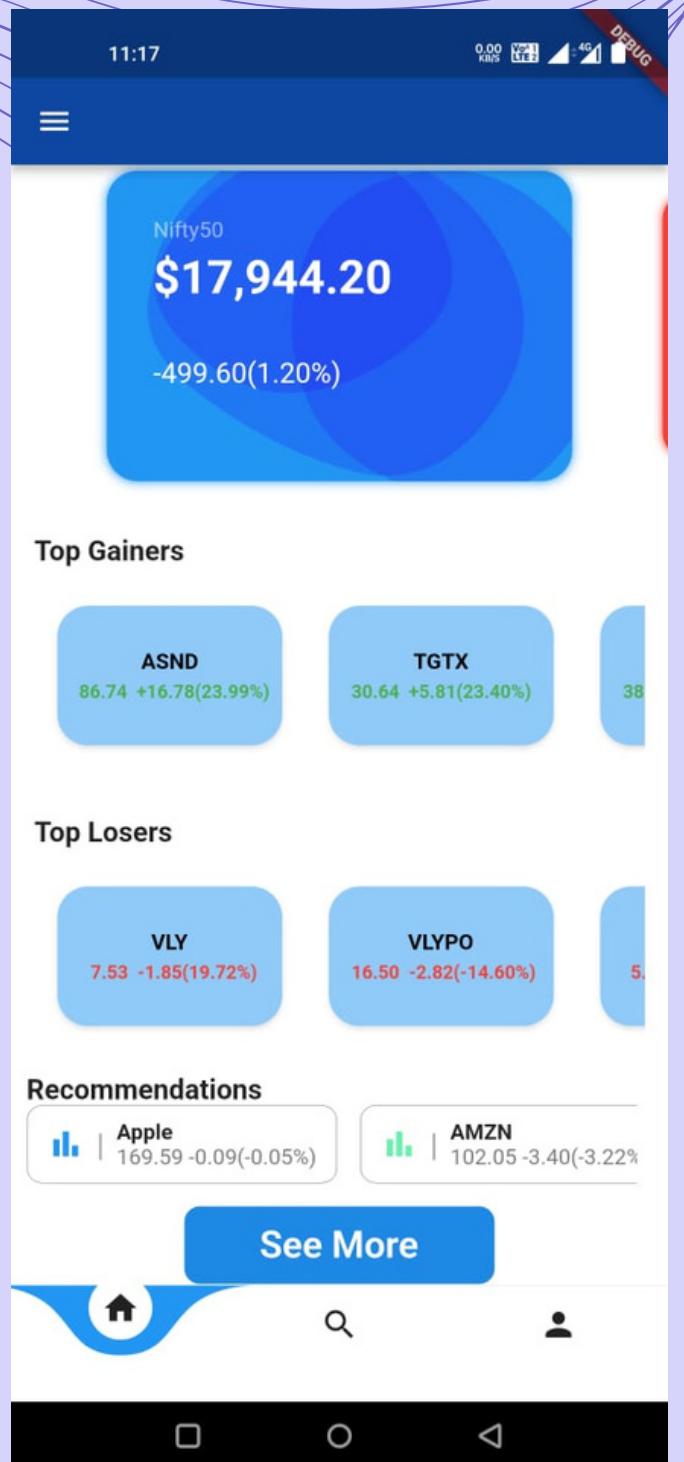
We would go with ARIMA because the r^2 of ARIMA is greater than Linear Regression. It is a more flexible and powerful technique than Linear Regression for modeling time series data, particularly when dealing with non-linear trends, non-stationarity, seasonality, and dependence.

APP

A sign-up form with a back arrow and title 'Sign Up'. It contains three input fields: 'Enter UserName' (user icon), 'Enter Email Id' (user icon), and 'Enter Password' (lock icon). At the bottom is a white button labeled 'Sign Up'.A password reset screen with a back arrow and title 'Reset Password'. It has a single input field 'Enter Email Id' (user icon) and a large white button labeled 'Reset Password'.

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- A sidebar menu titled 'Personal' with a blue header. It lists four items: 'Login Page' (with user icon), 'Registration Page' (with user plus icon), 'Forgot Password Page' (with three dots icon), and 'Logout' (with right arrow icon).

APP



PROJECT MANAGEMENT

Steps	30 Jan, 2023	13 Feb, 2023	27 Feb, 2023	27 March, 2023	13 March, 2023	10 April, 2023	27 April, 2023
Creating figma prototypes							
Evaluating different Machine Learning Models							
Selecting best models							
Creating frontend on Flutter							
Connecting backend with Machine Learning							
Usability Evaluation							

ARTIFACTS – SOURCE CODE AND APK (GOOGLE DRIVE)

https://colab.research.google.com/drive/1nQ3GxTTShnWm_M0qxFHaXLnpHQ-dr83M?usp=sharing.

https://drive.google.com/drive/folders/1kMNskUBiSnwt07LIJi7xBqKqCYx1qOD?usp=share_link

THANK YOU FOR LISTENING!

