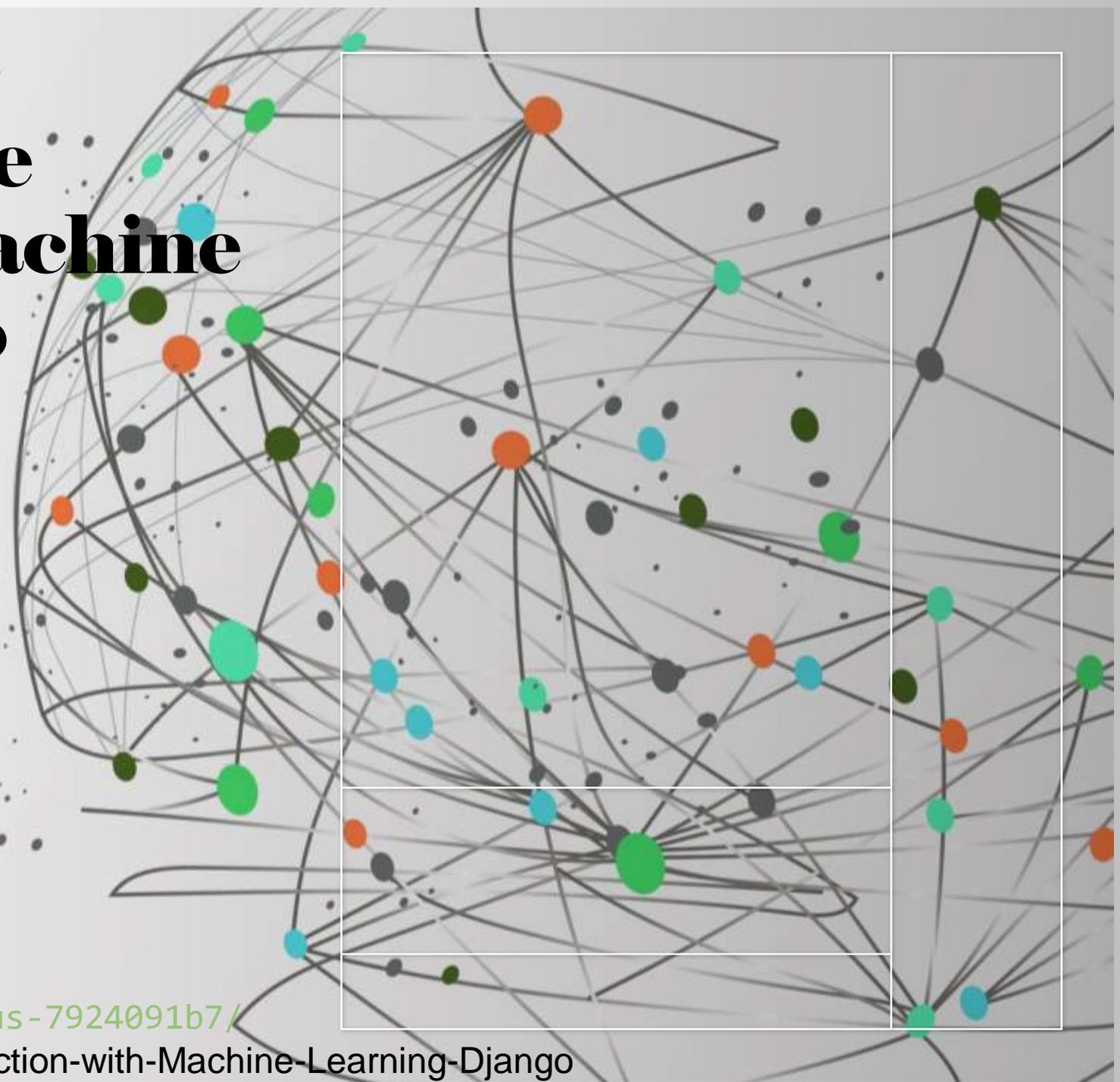


Stock Market Price Prediction with Machine Learning & Django



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<https://github.com/vishal815/-Stock-market-Prediction-with-Machine-Learning-Django>



Objective

- The main objective of this project is to develop a web application that can predict stock price based on real-time data

Project Scope



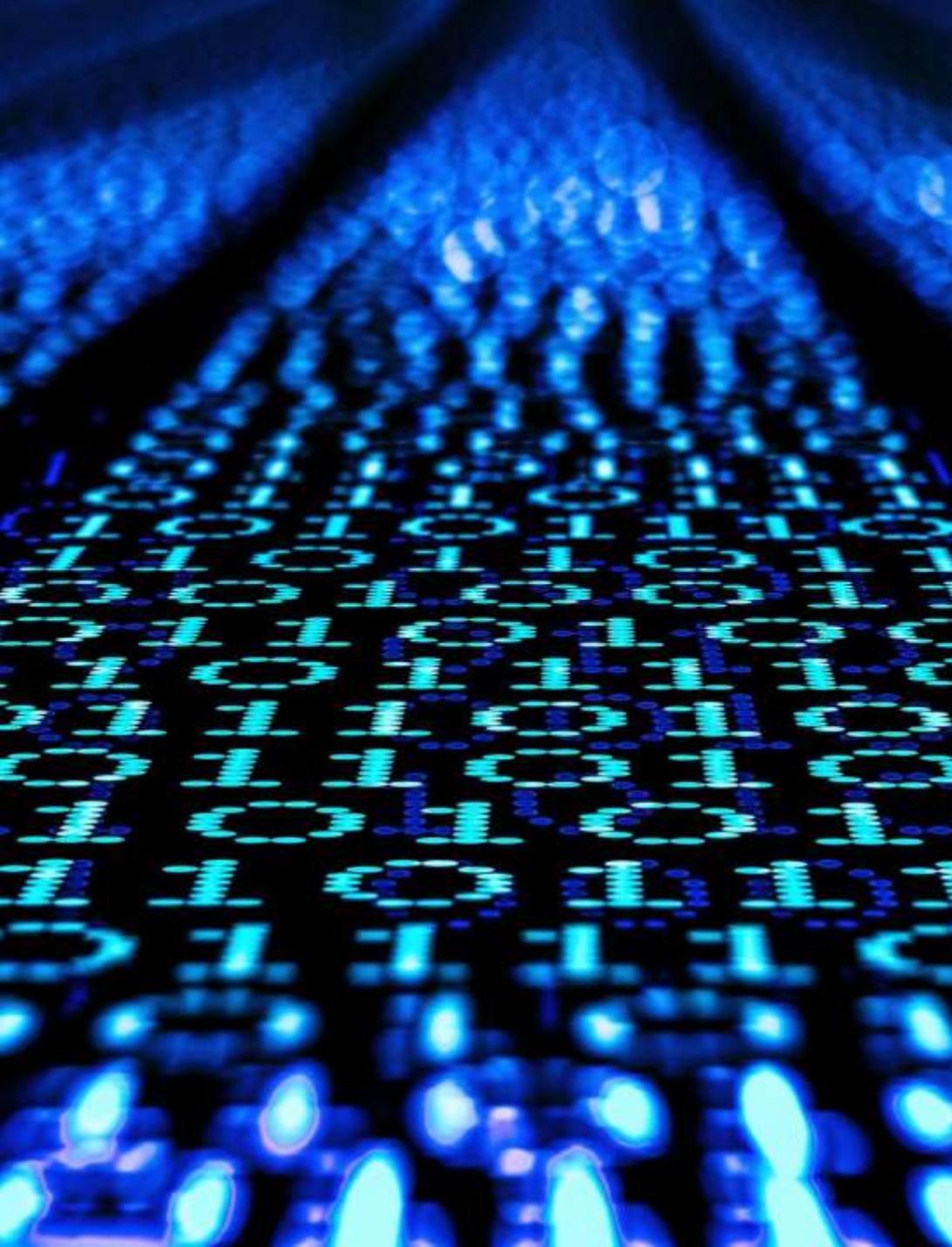
The project has a wide scope, as it is not intended for a particular organization



This project aims to develop generic software using machine learning that can be applied by any business organization



It provides facility to users and generates a huge amount of summary data



Languages used

- HTML
- CSS
- JavaScript
- Python

Framework



BOOTSTRAP



DJANGO

Machine-Learning Algorithms

- Multiple Linear Regression
- NumPy
- Pandas
- scikit-learn



APIs used

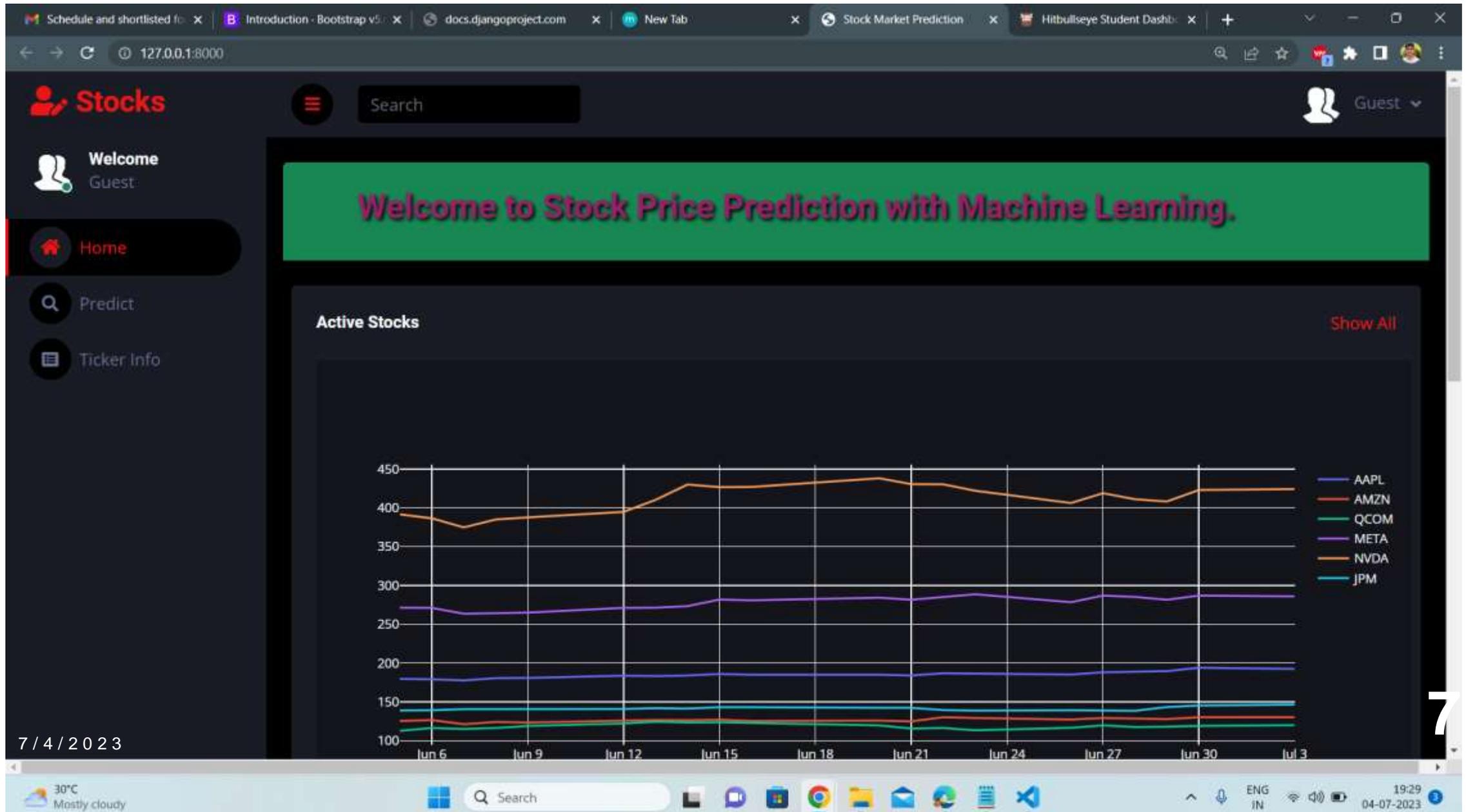
- Yahoo Finance API
- REST API

IDE used

- VS Code
- Jupyter Notebook

Output Screen-shots of the project:

The Home page of the application that displays real time data of stock prices.



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Stocks

Guest

Welcome Guest

Home

Predict

Ticker Info

AAPL	193.7799987793	193.8800048828	191.7599945068	192.4600067139	192.4600067139	31458200.0
AMZN	130.8200073242	131.8500061035	130.0700073242	130.2200012207	130.2200012207	28264800.0
GOOGL	119.2399978638	120.1900024414	118.8199996948	119.9000015259	119.9000015259	14467900.0
UBER	43.1699981689	43.4000015259	42.5800018311	43.0900001526	43.0900001526	7578100.0
TSLA	276.4899902344	284.25	275.1099853516	279.8200073242	279.8200073242	119685900.0

Trending Tickers (Yahoo Finance)

Market Watch - Equity/Stock (NSE)

Vishal Lazrus
(This project assign by KUKBIT SL.)



Prediction page where users enter valid ticker value and number of days

The screenshot shows a web browser window with several tabs open. The active tab is titled "Stock Market Prediction" and shows a dark-themed web application. The browser's address bar displays "127.0.0.1:8000/search/".

The application interface includes a top navigation bar with the "Stocks" logo on the left and a user profile icon labeled "Guest" on the right. A sidebar on the left contains navigation links: "Home", "Predict" (highlighted with a red bar), and "Ticker Info".

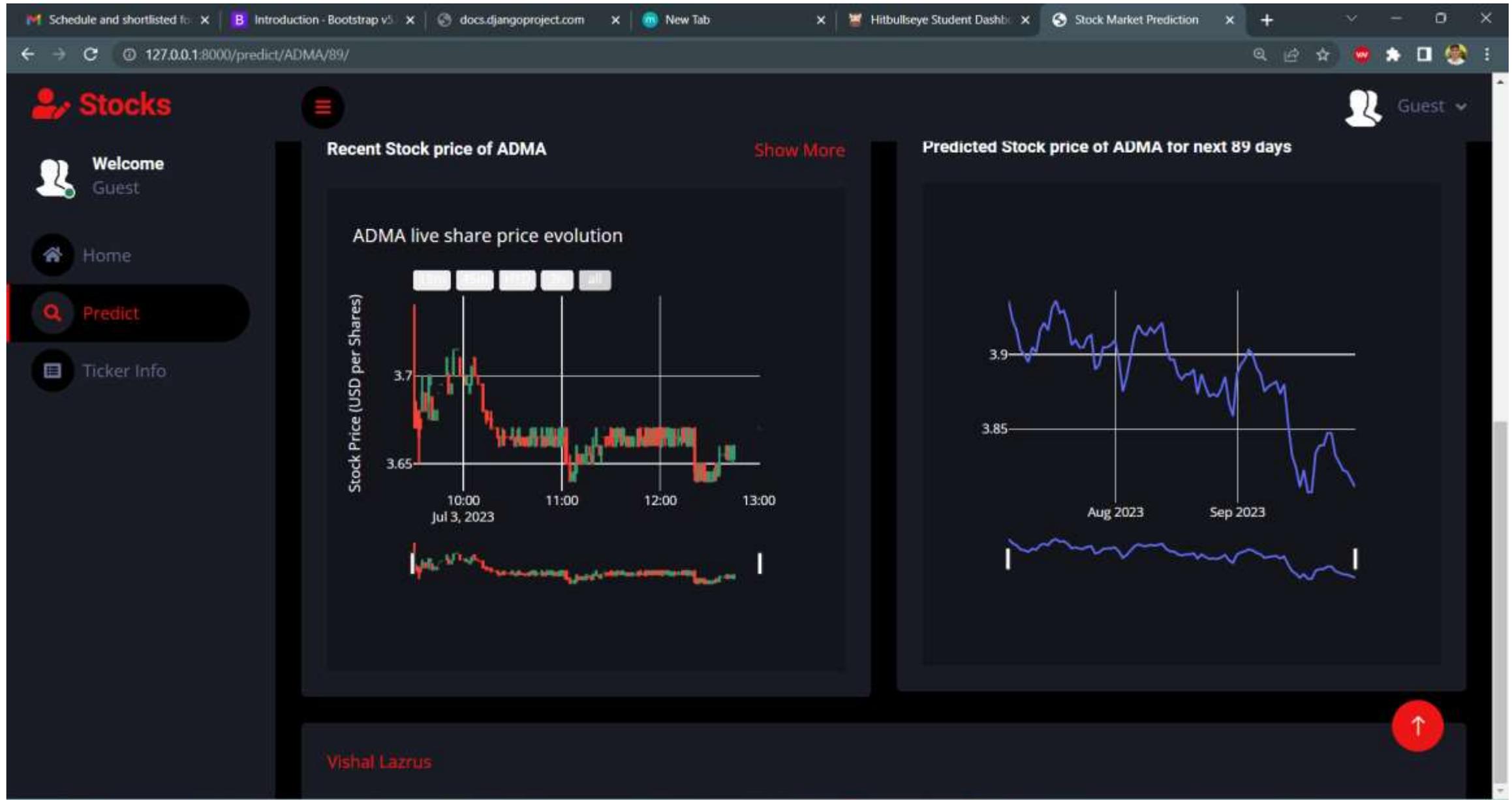
The main content area features a "Stock Market Predictor" section. It contains two input fields: "Ticker Name" with the value "ADMA" and "Number of Days" with the value "89". Below these fields is a "Search Ticker Value" label and a prominent red "Predict" button.

Prediction page displaying predicted stock price, ticker details, and QR Code

The screenshot shows a web application interface for stock prediction. The browser address bar displays the URL `127.0.0.1:8000/predict/ADMA/89/`. The application has a dark theme and a sidebar with navigation options: Home, Predict (highlighted), and Ticker Info. The main content area is titled "Information" and contains a table of stock details for ADMA. A "Show More" link is visible in the top right of the table. To the right of the table is a QR code with the text "Scan the QR Code" above it. The user is logged in as "Guest".

Information		Show More
Symbol	ADMA	
Name	ADMA Biologics Inc Common Stock	
Last Sale	\$2.20	
Net Change	0.07	
Percent Change	3.286%	
Market Capital	431974235.0	
Country	United States	
IPO Year	nan	
Volume	563806	
Sector	Health Care	
Industry	Biotechnology: Pharmaceutical Preparations	

Left graph shows real-time stock price for past day, right graph shows



Ticker Info page displaying details of valid tickers

The screenshot shows a web browser window with several tabs open. The active tab is titled "127.0.0.1:8000/ticker/". The application interface has a dark theme. On the left, there is a sidebar with a "Stocks" logo and a navigation menu with items: "Welcome Guest", "Home", "Predict", and "Ticker Info" (which is highlighted). The main content area is titled "All Tickers" and features a "Show All" link in the top right corner. Below the title is a table with two columns: "Ticker Symbol" and "Ticker Name". The table lists the following tickers:

Ticker Symbol	Ticker Name
A	Agilent Technologies Inc. Common Stock
AA	Alcoa Corporation Common Stock
AAC	Ares Acquisition Corporation Class A Ordinary Shares
AACG	ATA Creativity Global American Depositary Shares
AACIW	Armada Acquisition Corp. I Warrant
AADI	Aadi Bioscience Inc. Common Stock
AAIC	Arlington Asset Investment Corp Class A (new)
AAIN	Arlington Asset Investment Corp 6.000% Senior Notes Due 2026
AAL	American Airlines Group Inc. Common Stock
AAMC	Altisource Asset Management Corp Com
AAME	Atlantic American Corporation Common Stock

A red circular button with an upward-pointing arrow is located in the bottom right corner of the table area.

Code section

The image shows a Visual Studio Code editor window with the following components:

- Explorer:** Shows the project structure for 'STOCK PRICE PREDICTION WITH MACHINE LEARNING & DJANGO APP'. The 'views.py' file is selected in the 'app' directory.
- Code Editor:** Displays the content of 'views.py' with the following code:

```
13 import json
14
15 import yfinance as yf
16 import datetime as dt
17 import qrcode
18
19 from .models import Project
20
21 from sklearn.linear_model import LinearRegression
22 from sklearn import preprocessing, model_selection, svm
23
24
25
26
27
28 # The Home page when Server Loads up
29 def index(request):
30     # ----- Left Card Plot -----
31     # Here we use yf.download function
32     data = yf.download(
33
34         # passes the ticker
35         tickers=['AAPL', 'AMZN', 'QCOM', 'META', 'NVDA', 'JPM'],
36
37         group_by = 'ticker',
38
39         threads=True, # Set thread value to true
40
41         # used for access data[ticker]
42         period='1mo',
43         interval='1d'
44     )
45
46
```
- Terminal:** Shows the output of running 'python manage.py runserver' in a virtual environment. The output includes:

```
(virtualenv) PS C:\Users\91933\OneDrive\Desktop\Stock Price Prediction with Machine Learning & Django App> python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

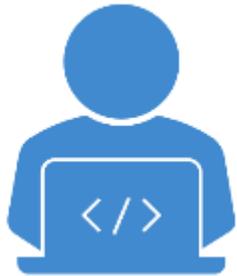
System check identified no issues (0 silenced).
July 04, 2023 - 19:58:05
Django version 3.2.6, using settings 'core.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```
- Bottom Bar:** Shows the current file location 'Ln 1, Col 1', encoding 'UTF-8', and other settings like 'Python 3.9.6 (virtualenv: venv)'.



Conclusion

- Our Stock Price Prediction with Machine Learning website, utilizing linear regression and Django, enables users to predict stock prices based on real-time data
- With easy-to-use interfaces and insightful graphs, users can make informed investment decisions
- We provide comprehensive ticker information and ensure accurate predictions through our machine learning algorithms

Thank you!



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