

# Stock Price Prediction Website – Documentation

## Project Overview

This project is a Flask-based web application that predicts the next day's closing stock price based on historical data. Users enter a ticker symbol, and the model fetches data from Yahoo Finance (yfinance) and applies Linear Regression to make predictions.

## Technology Stack

- **Python**
- **Flask** (for web framework)
- **Yahoo Finance API** (for real-time stock data)
- **Scikit-learn** (for Linear Regression)
- **HTML, CSS** (for the frontend)

## Features

- Fetches real-time stock data using yfinance
- Uses Linear Regression to predict the next day's closing price
- Displays the result in a simple web interface
- Supports stocks listed on **NSE India** (.NS extension)

## Project Files & Folder Structure

### Stock-Price-Prediction/

```
| — templates/
|   | — index.html    # Frontend UI
| — app.py           # Flask application (backend)
| — requirements.txt  # List of dependencies
| — README.md        # Project documentation
| — .gitignore       # Files to exclude (optional)
```

## How to Run the Project Locally

### Step 1: Install Prerequisites:

Ensure Python is installed on your system.

Then, install the required libraries:

"pip install flask pandas numpy yfinance scikit-learn"

### **Step 2: Clone the Repository:**

"git clone https://github.com/your-username/your-repository-name.git  
cd your-repository-name"

### **Step 3: Run the Flask Application:**

"python app.py"

### **Step 4: Open in Browser**

After running the server, open your browser and go to:

<http://127.0.0.1:5000/>

### **How to Use the Web App**

1. Enter a stock **ticker symbol** (Example: RELIANCE, TCS, INFY).
2. Click the **Submit** button.
3. The model will fetch historical data and **predict the next day's closing price**.