**User side views.py**

from django.shortcuts import render

from .forms import UserRegistrationForm

from django.contrib import messages

from .models import UserRegistrationModel

from django.http import HttpResponse

# Create your views here.

def UserRegisterActions(request):

if request.method == 'POST':

form = UserRegistrationForm(request.POST)

if form.is\_valid():

print('Data is Valid')

form.save()

messages.success(request, 'You have been successfully registered')

form = UserRegistrationForm()

return render(request, 'UserRegistrations.html', {'form': form})

else:

messages.success(request, 'Email or Mobile Already Existed')

print("Invalid form")

else:

form = UserRegistrationForm()

return render(request, 'UserRegistrations.html', {'form': form})

def UserLoginCheck(request):

if request.method == "POST":

loginid = request.POST.get('loginname')

pswd = request.POST.get('pswd')

print("Login ID = ", loginid, ' Password = ', pswd)

try:

check = UserRegistrationModel.objects.get(loginid=loginid, password=pswd)

status = check.status

print('Status is = ', status)

if status == "activated":

request.session['id'] = check.id

request.session['loggeduser'] = check.name

request.session['loginid'] = loginid

request.session['email'] = check.email

print("User id At", check.id, status)

return render(request, 'users/UserHome.html', {})

else:

messages.success(request, 'Your Account has not been activated by Admin.')

return render(request, 'UserLogin.html')

except Exception as e:

print('Exception is ', str(e))

pass

messages.success(request, 'Invalid Login id and password')

return render(request, 'UserLogin.html', {})

def UserHome(request):

return render(request, 'users/UserHome.html', {})

def user\_view\_data(request):

import pandas as pd

from django.conf import settings

import os

path =os.path.join(settings.MEDIA\_ROOT, 'stockForecast.csv')

df = pd.read\_csv(path)

print(df)

df = df[['Date', 'Open', 'High', 'Low', 'Close']]

# df = df.head(10)

df = df.head(100).to\_html

return render(request, 'users/view\_data.html',{'data': df})

def user\_trainset(request):

from .utility import train\_set

rf\_error\_rate, rf\_std = train\_set.calc\_random\_forest\_regressor()

svm\_error\_rate, svm\_std = train\_set.calc\_svm\_model()

dt\_error\_rate,dt\_std=train\_set.calc\_decision\_tree\_model()

gbr\_error\_rate, gbr\_std = train\_set.calc\_gradient\_boosting\_model()

lr\_error\_rate, lr\_std = train\_set.calc\_linear\_model()

rf = {'rf\_error\_rate': rf\_error\_rate, 'rf\_std': rf\_std}

svm={'svm\_error\_rate' : svm\_error\_rate,'svm\_std': svm\_std}

dt = {'dt\_error\_rate': dt\_error\_rate, 'dt\_std': dt\_std}

gbr = {'gbr\_error\_rate': gbr\_error\_rate, 'gbr\_std': gbr\_std}

lr = {'lr\_error\_rate': lr\_error\_rate, 'lr\_std': lr\_std}

return render(request,'users/train\_set\_results.html',{"rf": rf,"svm":svm,"dt":dt,"gbr":gbr,"lr":lr} )

def user\_testset(request):

from .utility import test\_set

rf\_error\_rate, rf\_std = test\_set.calc\_random\_forest\_regressor()

svm\_error\_rate, svm\_std = test\_set.calc\_svm\_model()

dt\_error\_rate, dt\_std = test\_set.calc\_decision\_tree\_model()

gbr\_error\_rate, gbr\_std = test\_set.calc\_gradient\_boosting\_model()

lr\_error\_rate, lr\_std = test\_set.calc\_linear\_model()

rf = {'rf\_error\_rate': rf\_error\_rate, 'rf\_std': rf\_std}

svm = {'svm\_error\_rate': svm\_error\_rate, 'svm\_std': svm\_std}

dt = {'dt\_error\_rate': dt\_error\_rate, 'dt\_std': dt\_std}

gbr = {'gbr\_error\_rate': gbr\_error\_rate, 'gbr\_std': gbr\_std}

lr = {'lr\_error\_rate': lr\_error\_rate, 'lr\_std': lr\_std}

return render(request, 'users/test\_set\_result.html', {"rf": rf, "svm": svm, "dt": dt, "gbr": gbr, "lr": lr})

def user\_train\_deep\_learning(request):

from .utility import deep\_learnig\_model

train\_error\_rate,train\_std,test\_std,test\_error\_rate = deep\_learnig\_model.calculate\_rnn\_results()

return render(request, "users/train\_set\_results.html", {

"train\_std": train\_std, "train\_error\_rate": train\_error\_rate, "test\_std": test\_std, "test\_error\_rate": test\_error\_rate

})

def user\_prediction(request):

from .utility.ForeCastModel import StockPriceForeCast

obj = StockPriceForeCast()

rslt = obj.start\_future\_prediction()

rslt = rslt.to\_html

return render(request, "users/forecast\_result.html", {"rslt": rslt})

def analysis(request):

from .utility.analysis import Forecast\_analysis

rslt = Forecast\_analysis()

return render(request, "users/analysis.html",{"rslt":rslt})

# yts=analysis()

**Urls.py**

"""diabetic\_walking\_through URL Configuration

The `urlpatterns` list routes URLs to views. For more information please see:

https://docs.djangoproject.com/en/2.2/topics/http/urls/

Examples:

Function views

1. Add an import: from my\_app import views

2. Add a URL to urlpatterns: path('', views.home, name='home')

Class-based views

1. Add an import: from other\_app.views import Home

2. Add a URL to urlpatterns: path('', Home.as\_view(), name='home')

Including another URLconf

1. Import the include() function: from django.urls import include, path

2. Add a URL to urlpatterns: path('blog/', include('blog.urls'))

"""

from django.contrib import admin

from admins import views as admins

from django.urls import path

from users import views as usr

from . import views as mainView

urlpatterns = [

# path('admin/', admin.site.urls),

path('', mainView.index, name='index'),

path("UserRegister/", mainView.UserRegister, name="UserRegister"),

path("AdminLogin/", mainView.AdminLogin, name="AdminLogin"),

path('index/', mainView.index, name='index'),

path("UserLogin/", mainView.UserLogin, name="UserLogin"),

### User Side Views

path("UserRegisterActions/", usr.UserRegisterActions, name="UserRegisterActions"),

path("UserLoginCheck/", usr.UserLoginCheck, name="UserLoginCheck"),

path("UserHome/", usr.UserHome, name="UserHome"),

path("user\_view\_data/", usr.user\_view\_data, name="user\_view\_data"),

path("user\_trainset/", usr.user\_trainset, name="user\_trainset"),

path("user\_testset/", usr.user\_testset, name="user\_testset"),

path("user\_prediction/", usr.user\_prediction, name="user\_prediction"),

path("user\_train\_deep\_learning/", usr.user\_train\_deep\_learning, name="user\_train\_deep\_learning"),

path("analysis/", usr.analysis, name="analysis"),

### Admin Side Views

path("AdminLoginCheck/", admins.AdminLoginCheck, name="AdminLoginCheck"),

path("AdminHome/", admins.AdminHome, name="AdminHome"),

path("ViewRegisteredUsers/", admins.ViewRegisteredUsers, name="ViewRegisteredUsers"),

path("admin\_forecast/", admins.admin\_forecast, name="admin\_forecast"),

path("AdminActivaUsers/", admins.AdminActivaUsers, name="AdminActivaUsers"),

# path("AdminDataPreProcess/", admins.AdminDataPreProcess, name="AdminDataPreProcess"),

]

**Index.html**

{% load static %}

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<meta content="width=device-width, initial-scale=1.0" name="viewport">

<title> Forecast Indian Stock Market</title>

<meta content="" name="description">

<meta content="" name="keywords">

<!-- Favicons -->

<link href="{% static 'main\_static/img/favicon.png' %}" rel="icon">

<link href="{% static 'main\_static/img/apple-touch-icon.png' %}" rel="apple-touch-icon">

<!-- Google Fonts -->

<link href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i,700,700i|Raleway:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,400,400i,500,500i,600,600i,700,700i"

rel="stylesheet">

<!-- Vendor CSS Files -->

<link href="{% static 'main\_static/vendor/animate.css/animate.min.css' %}" rel="stylesheet">

<link href="{% static 'main\_static/vendor/aos/aos.css' %}" rel="stylesheet">

<link href="{% static 'main\_static/vendor/bootstrap/css/bootstrap.min.css' %}" rel="stylesheet">

<link href="{% static 'main\_static/vendor/bootstrap-icons/bootstrap-icons.css' %}" rel="stylesheet">

<link href="{% static 'main\_static/vendor/boxicons/css/boxicons.min.css' %}" rel="stylesheet">

<link href="{% static 'main\_static/vendor/glightbox/css/glightbox.min.css' %}" rel="stylesheet">

<link href="{% static 'main\_static/vendor/remixicon/remixicon.css' %}" rel="stylesheet">

<link href="{% static 'main\_static/vendor/swiper/swiper-bundle.min.css' %}" rel="stylesheet">

<!-- Template Main CSS File -->

<link href="{% static 'main\_static/css/style.css' %}" rel="stylesheet">

</head>

<body>

<!-- ======= Header ======= -->

<header id="header" class="fixed-top">

<div class="container d-flex align-items-center justify-content-between">

<h1 class="logo"><a href="/">Stock <span class="text-danger">Market</span> </a></h1>

<!-- Uncomment below if you prefer to use an image logo -->

<!-- <a href="index.html" class="logo"><img src="{% static 'main\_static/img/logo.png' %}" alt="" class="img-fluid"></a> -->

<nav id="navbar" class="navbar">

<ul>

<li><a class="nav-link scrollto active" href="#hero">Home</a></li>

<li><a class="nav-link scrollto" href="{% url 'UserLogin' %}">Users</a></li>

<li><a class="nav-link scrollto" href="{% url 'AdminLogin' %}">Admin</a></li>

<li><a class="getstarted scrollto" href="{% url 'UserRegister' %}"> Register</a></li>

</ul>

<i class="bi bi-list mobile-nav-toggle"></i>

</nav><!-- .navbar -->

</div>

</header><!-- End Header -->

<!-- ======= Hero Section ======= -->

<section id="hero">

<div id="heroCarousel" data-bs-interval="5000" class="carousel slide carousel-fade" data-bs-ride="carousel">

<ol class="carousel-indicators" id="hero-carousel-indicators"></ol>

<div class="carousel-inner" role="listbox">

<!-- Slide 1 -->

<div class="carousel-item active"

style="background-image: url({% static 'main\_static/img/slide/slide1.jpg' %})">

<div class="carousel-container">

<div class="container">

<h2 class="animate\_\_animated animate\_\_fadeInDown">Forecast <span>Indian Stock Market</span></h2>

<p class="animate\_\_animated animate\_\_fadeInUp">Comparative Analysis of Machine Learning

Algorithm to Forecast Indian Stock Market.

</p>

<a href="#about" class="btn-get-started animate\_\_animated animate\_\_fadeInUp scrollto">Read

More</a>

</div>

</div>

</div>

<!-- Slide 2 -->

<div class="carousel-item" style="background-image: url({% static 'main\_static/img/slide/slide2.jpg' %})">

<div class="carousel-container">

<div class="container">

<h2 class="animate\_\_animated animate\_\_fadeInDown">Forecast Indian Stock Market</h2>

<p class="animate\_\_animated animate\_\_fadeInUp">Comparative Analysis of Machine Learning

Algorithm to Forecast Indian Stock Market.</p>

<a href="#about" class="btn-get-started animate\_\_animated animate\_\_fadeInUp scrollto">Read

More</a>

</div>

</div>

</div>

<!-- Slide 3 -->

<div class="carousel-item" style="background-image: url({% static 'main\_static/img/slide/slide-3.jpg' %})">

<div class="carousel-container">

<div class="container">

<h2 class="animate\_\_animated animate\_\_fadeInDown">Forecast Indian Stock Market</h2>

<p class="animate\_\_animated animate\_\_fadeInUp"> Comparative Analysis of Machine Learning

Algorithm to Forecast Indian Stock Market

</p>

<a href="#about" class="btn-get-started animate\_\_animated animate\_\_fadeInUp scrollto">Read

More</a>

</div>

</div>

</div>

</div>

<a class="carousel-control-prev" href="#heroCarousel" role="button" data-bs-slide="prev">

<span class="carousel-control-prev-icon bi bi-chevron-left" aria-hidden="true"></span>

</a>

<a class="carousel-control-next" href="#heroCarousel" role="button" data-bs-slide="next">

<span class="carousel-control-next-icon bi bi-chevron-right" aria-hidden="true"></span>

</a>

</div>

</section><!-- End Hero -->

<main id="main">

<!-- ======= About Section ======= -->

<section id="about" class="about">

<div class="container" data-aos="fade-up">

<div class="section-title">

<h2>About</h2>

<p>Abstract</p>

</div>

<div class="row content">

<div class="col-lg-6" style="text-align: justify">

<p>

Complexity and diversity of the stock market has always attracted the researchers since ages to

find out the ways to predict the future movement. However, the volatility across the globe in

different stock markets makes this task more difficult.

</p>

<ul>

<li><i class="ri-check-double-line"></i> Statistical methods and modelling are

effective but can't address the vast range of problems encountered in the prediction of

movement

of the stock market.

</li>

<li><i class="ri-check-double-line"></i> The traditional methods used were not able to address

and give solution to

the complex problems prevailing in the stock market.

</li>

<li><i class="ri-check-double-line"></i> The machine learning and artificial

intelligence tools are used to solve the complex situations and problems of Big Data with

ease.

</li>

</ul>

</div>

<div class="col-lg-6 pt-4 pt-lg-0" style="text-align: justify">

<p>

In this paper authors propose to use six different algorithms i.e., Generalized Linear Model,

Deep Learning, Decision Tree, Random Forest, Gradient Boosted Trees and Support Vector Machine

and identify model which predict near to actuals. These algorithms were applied on the BSE index

data from April 2015 to 31st March 2020 and the model with least relative error is identified.

Amongst all the models applied, Gradient Boosted Trees is chosen to be the efficient one, as it

has least relative error and standard deviation. Further Gradient Boosted Trees is used to

forecast the results

</p>

<a href="#" class="btn-learn-more">Learn More</a>

</div>

</div>

</div>

</section><!-- End About Section -->

<!-- ======= Frequently Asked Questions Section ======= -->

<section id="faq" class="faq">

<div class="container" data-aos="fade-up">

<div class="section-title">

<h2>F.A.Q</h2>

<p>Frequently Asked Questions</p>

</div>

<div class="row faq-item d-flex align-items-stretch" data-aos="fade-up" data-aos-delay="100">

<div class="col-lg-5">

<i class="bx bx-help-circle"></i>

<h4>Can I trade when markets are closed or shut down?</h4>

</div>

<div class="col-lg-7">

<p>

You cannot trade after the market is closed or shut down. Even though trading no more requires

physical presence it isn’t possible to trade after the market is shut down. You can only trade

between 09:15 am to 3:30 pm, however many passive investors trade after trading hours. The

orders placed after trading hours are called AMO or After Market Orders and they sometimes

create a volatile market. AMO also causes price fluctuations in the share price.

</p>

</div>

</div><!-- End F.A.Q Item-->

<div class="row faq-item d-flex align-items-stretch" data-aos="fade-up" data-aos-delay="200">

<div class="col-lg-5">

<i class="bx bx-help-circle"></i>

<h4> How many Sectors are there to invest in Stock Market?</h4>

</div>

<div class="col-lg-7">

<p>

You can invest in 11 different sectors in the stock market. This type of industry categorization

helps the portfolio manager create a diverse portfolio and allocate funds more efficiently.

</p>

</div>

</div><!-- End F.A.Q Item-->

<div class="row faq-item d-flex align-items-stretch" data-aos="fade-up" data-aos-delay="300">

<div class="col-lg-5">

<i class="bx bx-help-circle"></i>

<h4>Is there any time for buying shares or doing a trade?</h4>

</div>

<div class="col-lg-7">

<p>

Yes, you can only trade between 09:15 am to 3:30 pm on weekdays. But you can place AMO type of

orders after these trading hours.

</p>

</div>

</div><!-- End F.A.Q Item-->

<div class="row faq-item d-flex align-items-stretch" data-aos="fade-up" data-aos-delay="400">

<div class="col-lg-5">

<i class="bx bx-help-circle"></i>

<h4>Is it safe to invest in Unlisted Stocks as a beginner?</h4>

</div>

<div class="col-lg-7">

<p>

Many traders have stock market questions related to unlisted stocks. Investing in unlisted

stocks requires expertise and sound knowledge of the stocks. Beginners often lack this knowledge

and can incur losses. But if your firm about the future growth of the company only then you can

think of investing in unlisted stocks.

</p>

</div>

</div><!-- End F.A.Q Item-->

<div class="row faq-item d-flex align-items-stretch" data-aos="fade-up" data-aos-delay="500">

<div class="col-lg-5">

<i class="bx bx-help-circle"></i>

<h4> How to find good companies as there are many publicly listed companies in the Indian stock

market?

</h4>

</div>

<div class="col-lg-7">

<p>

You can find many online tools to find good stocks. You can use the stock screener to find good

stocks from the pool of all the companies listed on the stock exchange. You can use different

filters like valuations, the market cap of the company, so on.

</p>

</div>

</div><!-- End F.A.Q Item-->

</div>

</section><!-- End Frequently Asked Questions Section -->

<!-- ======= Contact Section ======= -->

</main><!-- End #main -->

<!-- ======= Footer ======= -->

<footer id="footer">

<div class="container">

<div class="copyright">

&copy; Copyright <strong><span>STOCK</span> MARKET</strong>. All Rights Reserved

</div>

<div class="credits">

<!-- All the links in the footer should remain intact. -->

<!-- You can delete the links only if you purchased the pro version. -->

<!-- Licensing information: https://bootstrapmade.com/license/ -->

<!-- Purchase the pro version with working PHP/AJAX contact form: https://bootstrapmade.com/multi-responsive-bootstrap-template/ -->

Designed by <a href="">Alex Corporation</a>

</div>

</div>

</footer><!-- End Footer -->

<div id="preloader"></div>

<a href="#" class="back-to-top d-flex align-items-center justify-content-center"><i

class="bi bi-arrow-up-short"></i></a>

<!-- Vendor JS Files -->

<script src="{% static 'main\_static/vendor/aos/aos.js' %}"></script>

<script src="{% static 'main\_static/vendor/bootstrap/js/bootstrap.bundle.min.js' %}"></script>

<script src="{% static 'main\_static/vendor/glightbox/js/glightbox.min.js' %}"></script>

<script src="{% static 'main\_static/vendor/isotope-layout/isotope.pkgd.min.js' %}"></script>

<script src="{% static 'main\_static/vendor/php-email-form/validate.js' %}"></script>

<script src="{% static 'main\_static/vendor/purecounter/purecounter.js' %}"></script>

<script src="{% static 'main\_static/vendor/swiper/swiper-bundle.min.js' %}"></script>

<!-- Template Main JS File -->

<script src="{% static 'main\_static/' %}js/main.js"></script>

</body>

</html>