UNIVERSITY ADMIT ELIGIBILITY PREDICTOR

A PROJECT REPORT

Domain : Applied Data Science

Team ID : PNT2022TMID47303

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CHAPTER	TITLE	PAGE NO.
1	**INTRODUCTION**	
	1.1 PROJECT OVERVIEW	3
	1.2 PURPOSE	3
2	**LITERATURE SURVEY**	
	2.1 EXISTING PROBLEM	4
	2.2 REFERENCES	4
	2.3 PROBLEM STATEMENT DEFINITION	4
3	**IDEATION & PROPOSED SOLUTION**	
	3.1 EMPATHY MAP CANVAS	5
	3.2 IDEATION & BRAINSTORMING	6
	3.3 PROPOSED SOLUTION	7
	3.4 PROBLEM SOLUTION FIT	8
4	**REQUIREMENT ANALYSIS**	
	4.1 FUNCTIONAL REQUIREMENT	9
	4.2 NON-FUNCTIONAL REQUIREMENTS	10
5	**PROJECT DESIGN**	
	5.1 DATA FLOW DIAGRAM	11
	5.2 SOLUTION & TECHNICAL ARCHITECTURE	11
	5.3 USER STORIES	13
6	**PROJECT PLANNING & SCHEDULING**	
	6.1 SPRINT PLANNING & ESTIMATION	14
	6.2 SPRINT DELIVERY SCHEDULE	15
	6.3 REPORTS FROM JIRA	15
7	**CODING & SOLUTIONING**	
	7.1 FEATURE 1	16
	7.2 FEATURE 2	19
	7.3 DATABASE SCHEMA	20
8	**TESTING**	
	8.1 TEST CASES	21
	8.2 USER ACCEPTANCE TESTING	22
9	**RESULTS**	
	9.1 PERFORMANCE METRICS	23
10	**ADVANTAGES & DISADVANTAGES**	25
11	**CONCLUSION**	26
12	**FUTURE SCOPE**	27

13	**APPENDIX** 13.1 SOURCE CODE 13.2 GITHUB & PROJECT DEMO LINK	 28 31

CHAPTER 1
INTRODUCTION

1.1 PROJECT OVERVIEW

Students admission is very important part of their life. It decides how their life is go in the future. This paper addresses machine learning models to predict the chance of a student to be admitted to a university. This project is a web-based University Admission Predictor. It is an AI based application that asks for the users to input their academic transcripts data and calculates their chances of admission into the University Tier that they selected using machine learning models. It also provides an analysis of the data and shows how chances of admissions can depend on various factors.

1.2 PURPOSE

The purpose of creating a web-based University Admission Predictor is to help students to find their chances of getting admitted into their favorite university. This helps in reducing the workload, stress and time consumption. It is fast, reliable and efficient. It avoids data redundancy and inconsistency. It mainly helps the students who are from rural areas and find the students chances of getting admitted into their favourite university.

CHAPTER 2
LITERATURE SURVEY

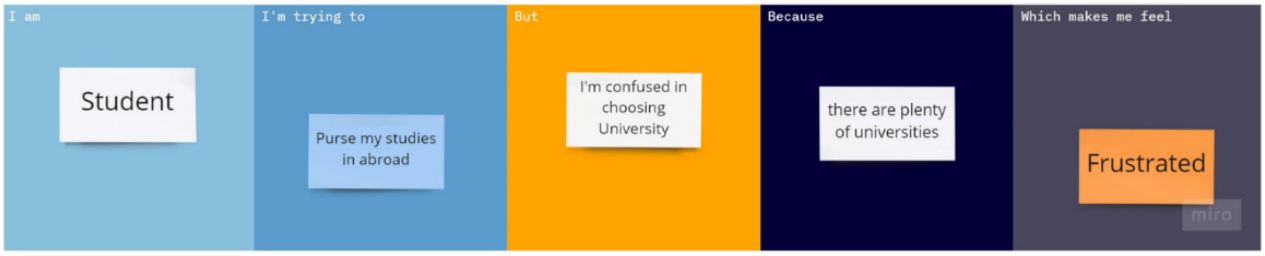
2.1 EXISTING PROBLEM

Previous research done in this area used Naive Bayes algorithm which will evaluate the success probability of student application into a respective university but the main drawback is they didn't consider all the factors which will contribute in the student admission process like TOEFL/IELTS, SOP, etc,. This model was developed to forecast the progress of prospective students by comparing the score of students currently studying at university. The model thus predicted whether the aspiring student should be admitted to university based on various scores of students. Since the comparisons are made only with students who got admission into the universities but not with students who got their admission rejected so this method will not be that much accurate.

2.2 REFERENCES

1. Vandit Manish Jain, Rihaan Satia, "College Admission Prediction using Ensemble Machine Learning Models".
2. Sujay S, "Supervised ML Modelling & Analysis for Graduate Admission Prediction".
3. Mohan S Acharya, Asfia Armaan, Aneeta S Antony, "A Comparison of Regression Models for Prediction of Graduate Admissions".
4. Sashank Sridhar, Siddartha Mootha, Santosh Kolagat, "A University Admission Prediction System using Stacked EnsembleLearning".
5. A. Sivasangari, V. Shivani, Y. Bindhu, D. Deepa, R. Vignesh, "Prediction Probability of Getting an Admission into a University using ML".

2.3 PROBLEM STATEMENT DEFINITION

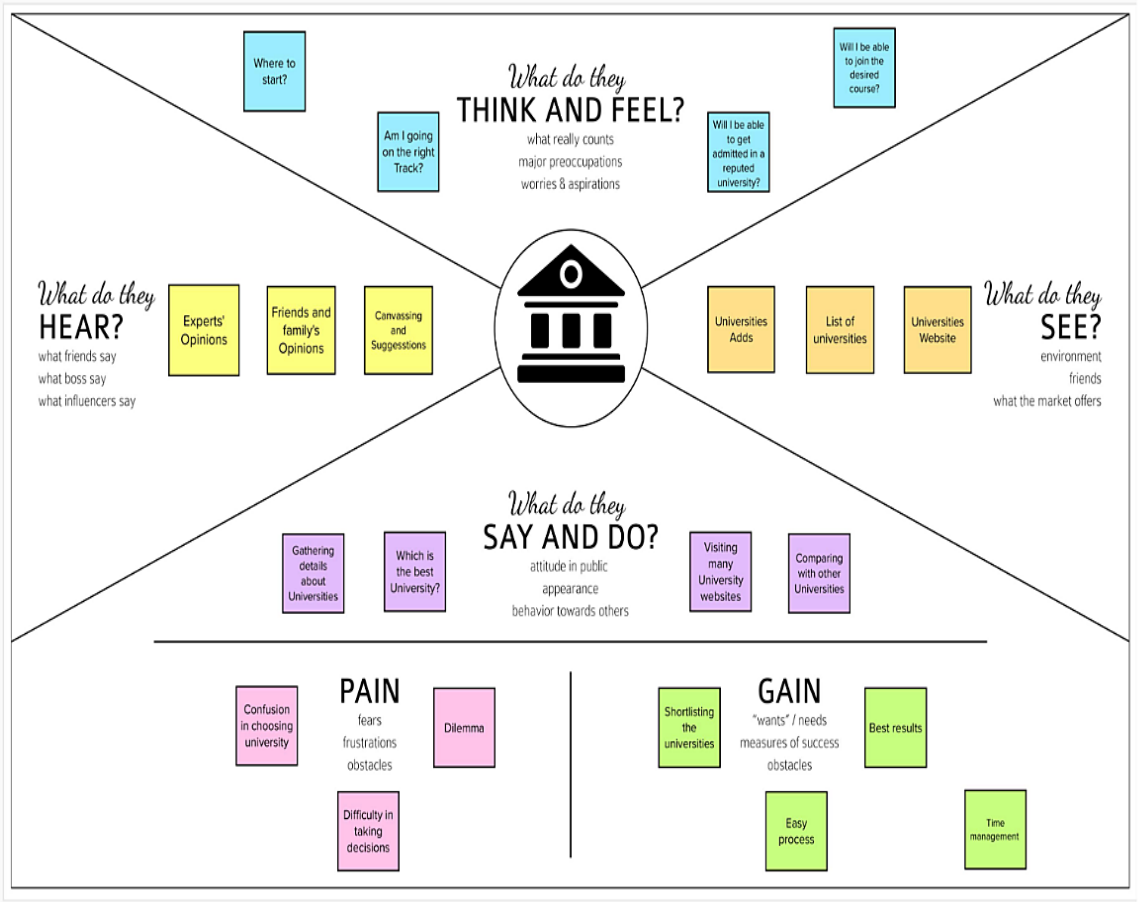


CHAPTER 3
IDEATION & PROPOSED SOLUTION

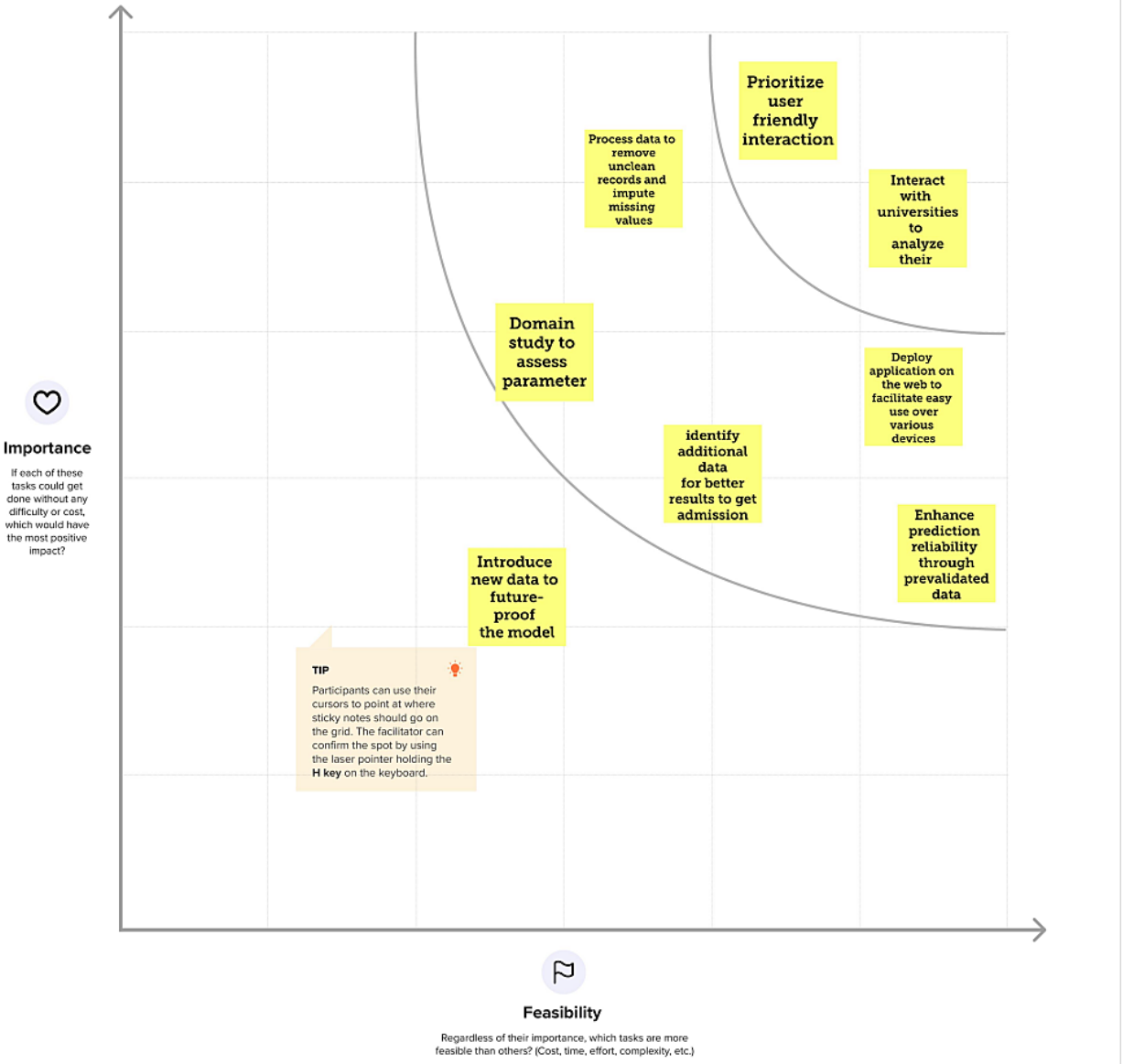
3.1 EMPATHY MAP CANVAS

Empathy Map Canvas:

University Admit Eligibility Predictor



3.2 IDEATION AND BRAINSTORMING



3.3 PROPOSED SOLUTION

S.NO	PARAMETERS	DESCRIPTION
1	Problem Statement	I am a student who is trying to choose a right university based on score but I couldn't because I am not aware of eligibility criteria which makes me feel frustrated.
2	Idea/Solution description	This idea helps students to get the list of university to which they can apply as the system shortlist the colleges by comparing the students marks and cut off to predict the possibility of admission or not.
3	Novelty/Uniqueness	The main advantages of the project are the computerization of the entrance seat allotment process. This makes the process easier and takes very lesstime when compared to the existing system.
4	Social Impact/Customer Satisfaction	It helps the students for making decision for right college. Here the chance of occurring errors is comparatively less. It is fast and efficient. Avoid the data repetition and inconsistence. It helps you to understand as to how your profile can be further improved to secure an admit in your preferred college. It can guide you whether you need to take GRE or not,in order to improve yourchances of admit in your target university.
5	Business Model	Institutions are under increasing pressure to admit more students, retain these students, and do their best to ensure the students success.This project not only relieves students from pressure but also helps these institutions to get relieved from their pressure.
6	Scalability of the Solution	This will also help you to finalize your dream university with a realistic roadmap, with the help of your information coupled with a bit of reality check on your academic scores such as GRE, TOFEL,etc., working experience and your CGPA.On the otherhand , we have connoisseurs who shall work with you to amplify your prospects of receiving offers by ensuring that the universities that you apply, do not digressfrom your profile, and chiefly your ambition. The concern id privacy and ownership for both students and teachers.

3.4 PROBLEM SOLUTION FIT

CHAPTER 4
REQUIREMENTS ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS

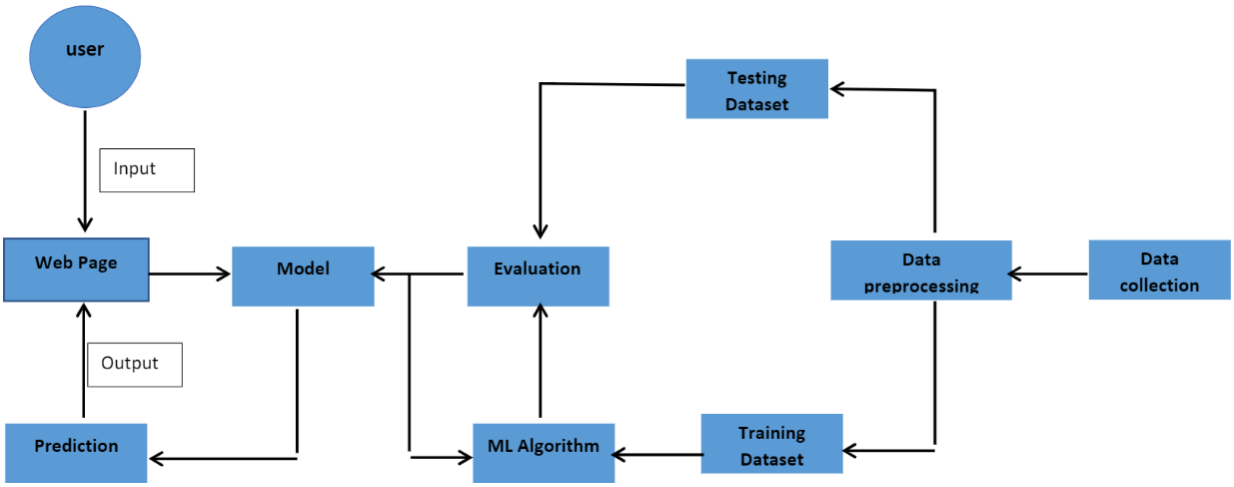
FR NO.	FUNCTIONAL REQUIREMENT (EPIC)	SUB REQUIREMENT (STORY/ SUB-TASK)
FR-1	User Registration	Registration through Form
FR-2	User Information	All the grades and scores necessary for the user's admission will need to be provided. These include, a. English Proficiency Test score - TOEFL scoreout of 120 marks b. Knowledge Evaluation Test score - GRE scoreoutof 340 marks c. High School / Undergraduate CGPA out of 10point d. Collect other info about University Rating, SOP, LOR and Research data from the users.
FR-3	Result Display	The user should complete the following tasks to get their admission prediction: a. enter the test scores required for admission prediction. b. The user's chances of acceptance will be provided and sentthrough mail or SMS.
FR-4	User Confirmation	Confirmation via Email Confirmation via OTP

4.2 NON - FUNCTIONAL REQUIREMENTS

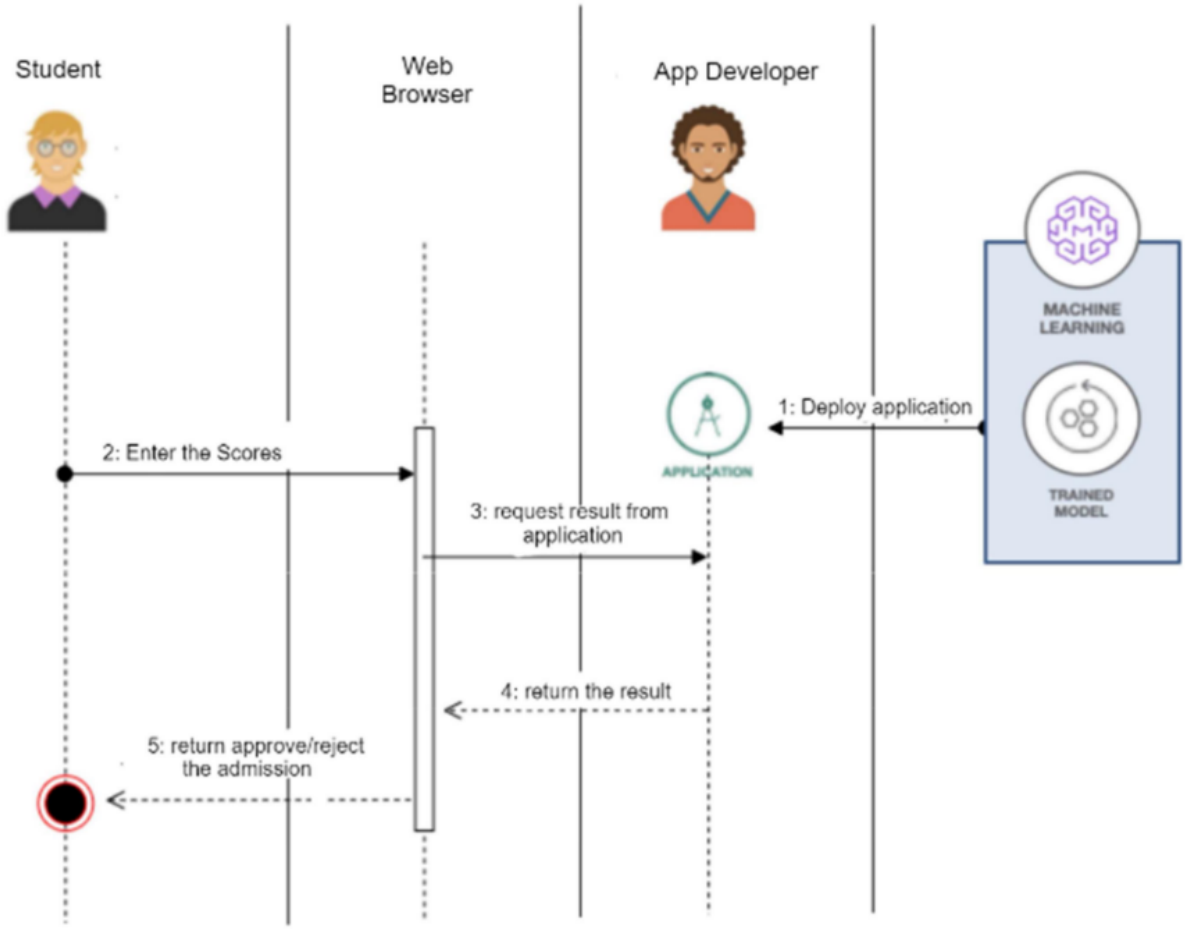
FR NO.	NON-FUNCTIONAL REQUIREMENT	DESCRIPTION
NFR-1	Usability	a. User-Friendly. b. No technical Experience is required to use the website. c. It takes lesstime to showthe output.
NFR-2	Security	a. Standard authentication protocols will be implemented. b. Data is secure.
NFR-3	Reliability	a. High accuracy so it can reliable for the users to make decisions. b. Easy-to-use interface, thus the user can share or recommend the solution to friends.
NFR-4	Performance	a. This system can support any number of users at a time. b. Efficiently optimized to provide results as soon as possible given the speed of the user's internet connection.
NFR-5	Availability	a. The solution willbe available 24/7. b. Avoids data redundancy and inconsistency. c. It is fast,efficient and reliable. d. A chance of occurrence of error is less when compared to existing system.
NFR-6	Scalability	a. The accuracy of the results can also be improved by integrating another ML approach if it is found to be more effective. b. The system can be improved to handle more concurrent users if available capacity occur.

CHAPTER 5
PROJECT DESIGN

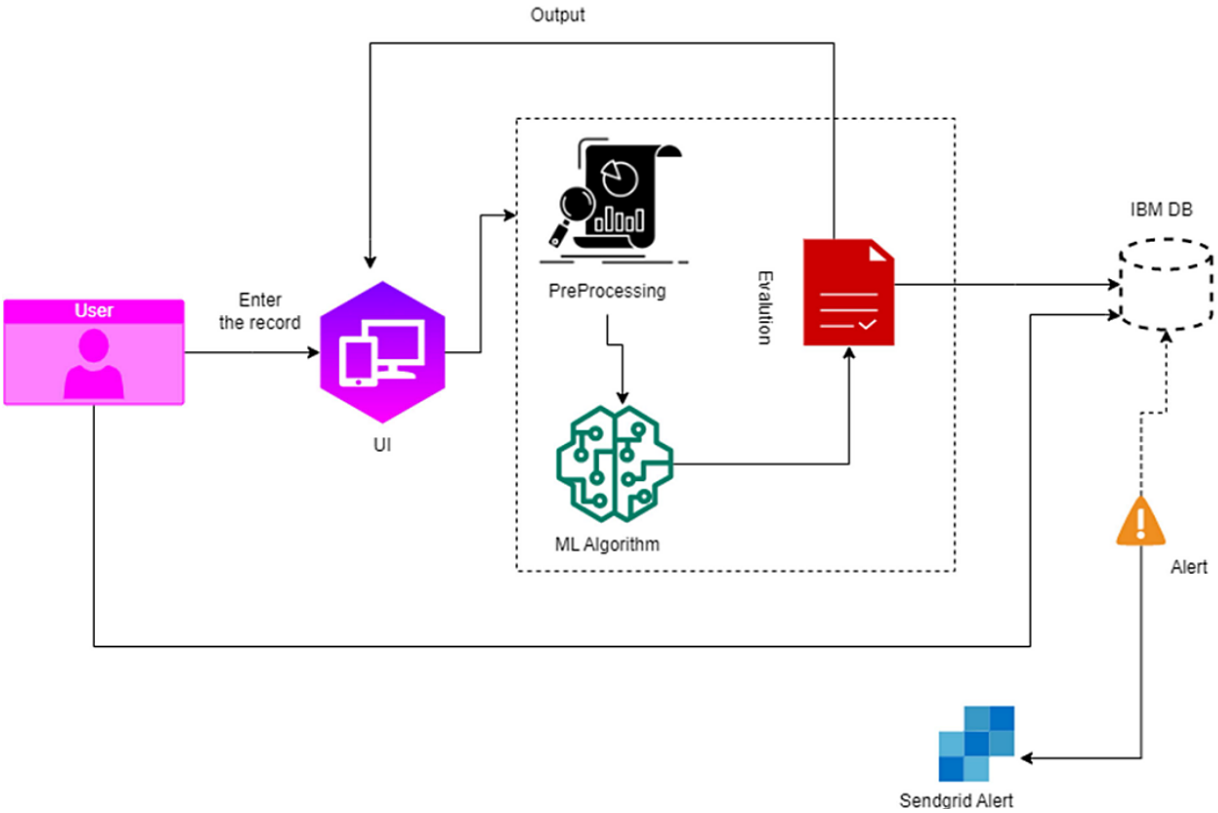
5.1 DATA FLOW DIAGRAMS



5.2 SOLUTION ARCHITECTURE



TECHNICAL ARCHITECTURE



5.3 USER STORIES

USER TYPE	FUNCTIONAL REQUIREMENT	USER STORY NUMBER	USER STORY / TASK	ACCEPTANCE CRITERIA	PRIORITY	RELEASE
Customer	Registration	USN -1	As a user, I can register for the website by entering my email, password and confirming my password	I can access my account and dashboard	High	Sprint - 1
		USN - 2	As a user I will receive confirmation email once I have registered for the website	I can receive confirmation email & click confirm	High	Sprint - 1
		USN -3	As a user I can also enter the marks without registering.	I can enter scores	Medium	Sprint - 3
	Login	USN - 4	As a user, I can log into the website by entering email & password	I can acces the Dashboard	High	Sprint - 2
	Dashboard	USN - 5	As a user, I can enter the scores	I can find eligibility	High	Sprint - 3
		USN - 6	As a user I can view the prediction	I can See the results	High	Sprint - 3
		USN - 7	As a viewer I can view my results in the email.	I get results in my email	Medium	Sprint - 4

CHAPTER 6
PROJECT PLANNING & SCHEDULING

6.1 SPRINT PLANNING & ESTIMATION

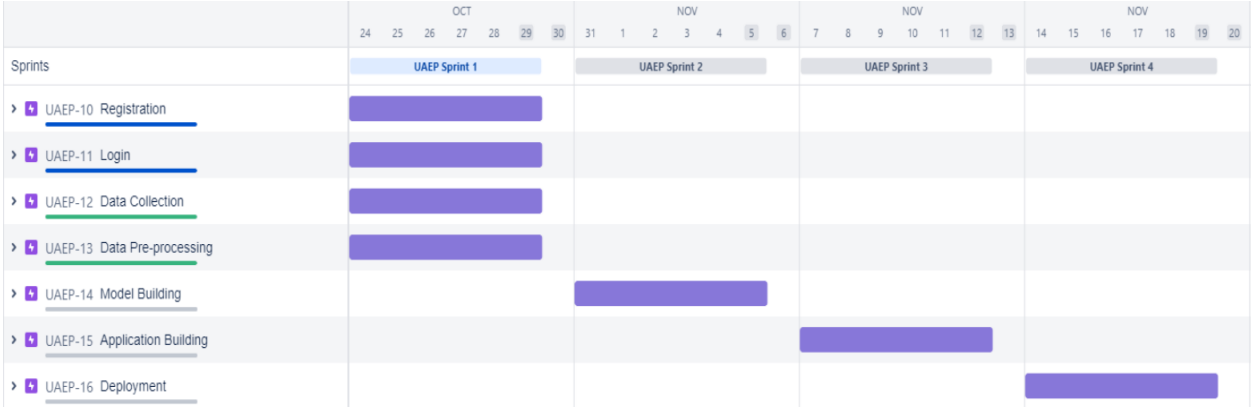
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	Medium	Madhan Prakash, Vignesh
Sprint-1	Login	USN-2	As a user, I can log into the application by entering email & password	1	High	Madhan Prakash, Vignesh
Sprint-1	Data Collection	USN-3	Gathering the information from various resources	1	Medium	Ajith, Baghatraj, Madhan Prakash, Vignesh
Sprint-1	Data Preprocessing	USN-4	To Convert and clean the raw data	2	High	Ajith, Baghatraj
Sprint-2	Model Building	USN-5	Using cleaned dataset, Model can be buildusing ML Algorithm	2	High	Ajith, Baghatraj
Sprint-2		USN-6	Training the classification model	1	High	Ajith, Baghatraj
Sprint-3	Application Building	USN-7	Building Python code and run the application	1	Medium	Madhan Prakash, Vignesh

Sprint-3		USN-8	Predicted Result has been sent to user registered mail	1	Medium	Ajith, Baghatraj, Madhan Prakash, Vignesh
Sprint-4	Implementation of the application and deployment on cloud	USN-9	Deployed on IBM Cloud	2	High	Ajith, Baghatraj, Madhan Prakash, Vignesh

6.2 SPRINT DELIVERY SCHEDULE

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint ReleaseDate (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

6.3 REPORTS FROM JIRA



CHAPTER 7
CODING & SOLUTIONING

7.1 FEATURE 1

- Analysed university admission statistics.
- Languages : Python
- IDE : Anaconda
- Libraries : Recommended

app.py

```python
from flask import render_template,Flask,request,redirect,url_for,g,flash,session
from flask_mysqldb import MySQL
import MySQLdb.cursors
import re
import numpy as np
import pandas as pd
import joblib

from send_mail import send_email,fail_mail,linear_mail

app = Flask(__name__)
app.secret_key = '12345'
app.config['MYSQL_HOST'] = 'localhost'
app.config['MYSQL_USER'] = 'root'
app.config['MYSQL_PASSWORD'] =''
app.config['MYSQL_DB']='uaep'

mysql = MySQL(app)


"""Prediction code"""
scaler = joblib.load(open("./models/scaler.pkl","rb"))
print('Scaler Model Loaded')
university = joblib.load(open('./models/university.pkl','rb'))
print('Naive Model Loaded')
linear_model = joblib.load(open('./models/linear_model.pkl','rb'))
print('Linear Model loaded')

# MAIN PAGE
@app.route('/',methods=['GET','POST'])
def main():
    return render_template('index.html')



@app.before_request
def load_user():
```

```python
@app.before_request
def load_user():
    if "username" in session:
        g.record = 1
        g.email = session['email']
    else:
        g.record = 0


#LOGIN page
@app.route('/loginpage',methods = ['GET','POST'])
def loginpage():
    if request.method=='POST':
        username = request.form.get('username')
        password = request.form.get('password')
        cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor)
        cursor.execute('select * from details where username = %s AND password = %s',(username,password))
        account = cursor.fetchone()

        if account:
            session['loggedin'] = True
            session['username'] = account['username']
            session['email'] = account['email']
            return render_template('prediction.html',username=session['username'],logout='logout')
        else:

            return render_template('sign-in.html',msg = 'username and password not found')
    return render_template('sign-in.html')

#logout
@app.route('/logout')
def logout():
    session.pop('username',None)
    return render_template('index.html')

#predict page
@app.route('/predict',methods=['GET','POST'])
```

```
    if request.method == 'POST':
        toefl = request.form.get('toefl')
        sop = request.form.get('sop')
        lor = request.form.get('lor')
        cgpa = request.form.get('cgpa')
        gre = request.form.get('gre')
        rating = request.form.get('rating')
        researchs = request.form.get('researchs')
        model = request.form.get('models')
        if toefl == '':
            msg = 'enter the TOEFL marks'
            return render_template('prediction.html',msg = msg)
        elif sop =='':
            msg = 'enter the SOP marks'
            return render_template('prediction.html',msg = msg)
        elif lor =='':
            msg = 'enter the  LOR marks'
            return render_template('prediction.html',msg = msg)
        elif gre =='':
            msg = 'enter the GRE marks'
            return render_template('prediction.html',msg = msg)
        elif cgpa =='':
            msg = 'enter the CGPA marks'
            return render_template('prediction.html',msg = msg)
        elif researchs =='Select any one':
            msg = 'Please select whether you researched about your admission'
            return render_template('prediction.html',msg = msg)
        elif model =='Select any one':
            msg = 'Please select whether you Naive Bayes Algorithm or Linear Regression Algorithm about your admission'
            return render_template('prediction.html',msg = msg)
        elif researchs =='Research':
            researchs = 1
        elif researchs == 'No Research':
            researchs = 0
```

```
        if g.record ==1:

            # input_lst = [gre,toefl,rating,sop,lor,cgpa,researchs]
            new_input = {
                'GRE Score':gre,
                'TOEFL Score' :toefl,
                'University Rating':rating,
                'SOP':sop,
                'LOR' : lor,
                'CGPA':cgpa,
                'Research':researchs
                }
            print(new_input)
            def predict_input(input):
                input_df = pd.DataFrame([input])
                print(input_df)
                input_df[input_df.columns] = scaler.transform(input_df[input_df.columns])
                print(input_df)
                if model == 'linear':
                    pred = linear_model.predict(input_df)
                else:
                    pred = university.predict(input_df)
                return pred

            prediction = predict_input(new_input)
            if model =='naivebayes':
                if prediction == 1:
                    send_email(g.email)
                    return render_template('success.html')
                elif prediction ==0:
                    fail_mail(g.email)
                    return render_template('fail.html')

            elif model == 'linear':
                predict = prediction * 100
                linear_mail(g.email,predict)
```

```
                return render_template('lineat_output.html',prediction= f'{predict}%')

        elif g.record == 0:
            # input_lst = [gre,toefl,rating,sop,lor,cgpa,researchs]
            new_input = {
                'GRE Score':gre,
                'TOEFL Score' :toefl,
                'University Rating':rating,
                'SOP':sop,
                'LOR' : lor,
                'CGPA':cgpa,
                'Research':researchs
                }
            print(new_input)
            def predict_input(input):
                input_df = pd.DataFrame([input])
                print(input_df)
                input_df[input_df.columns] = scaler.transform(input_df[input_df.columns])
                print(input_df)
                if model == 'linear':
                    pred = linear_model.predict(input_df)
                else:
                    pred = university.predict(input_df)
                return pred

            prediction = predict_input(new_input)
            if model =='naivebayes':
                if prediction == 1:
                    return render_template('success.html')
                elif prediction ==0:
                    return render_template('fail.html')

            elif model == 'linear':
                predict = prediction *100
                return render_template('lineat_output.html',prediction= f'{predict}%')

    if g.record == 1:
```

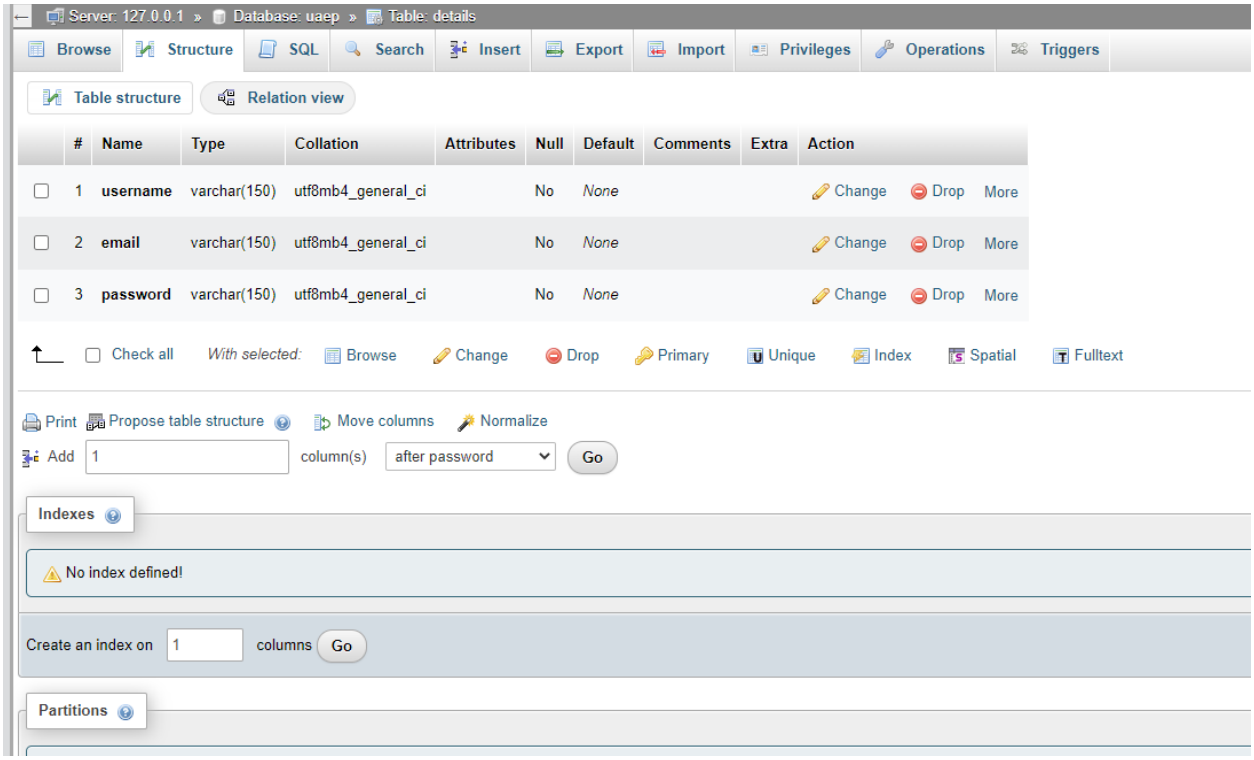
```
                predict = prediction *100
                return render_template('lineat_output.html',prediction= f'{predict}%')

    if g.record == 1:
        return render_template('prediction.html',username=session['username'],logout = 'logout')
    elif g.record ==0:
        return render_template('prediction.html')
#register page
@app.route('/register',methods = ['GET','POST'])
def register():
    if request.method == 'POST':
        username = request.form['username']
        email = request.form['mail']
        password = request.form['password']
        confirm_password = request.form['confirm-password']
        cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor)
        cursor.execute('SELECT * FROM details WHERE username= %s',(username,))
        account = cursor.fetchone()

        if account:
            msg = f'{username} already exist please enter an another username'
            return render_template('sign-up.html',msg = msg)
        elif not re.match(r'[^@]+@[^@]+\.[^@]+', email):
            msg = 'Enter the valid email id'
            return render_template('sign-up.html',msg = msg)
        elif not re.match( "^(?=.*[a-z])(?=.*[A-Z])(?=.*\d)(?=.*[@$!%*#?&])[A-Za-z\d@$!#%*?&]{6,20}$", password):
            msg = 'password must be at least 8 character and on special character and one capital letter'
            return render_template('sign-up.html',msg = msg)
        elif password !=confirm_password:
            msg = 'Password and confirm_password must be equal'
            return render_template('sign-up.html',msg = msg)
        elif not username or not password or not email:
            msg = 'Please fill out the form!'
            return render_template('sign-up.html',msg = msg)
        else:
            cursor.execute('Create table if not exists details(username varchar(150),email varchar(150),password varchar(150))')
            cursor.execute('insert into details value(%s,%s,%s)',(username,email,password))
        username = request.form['username']
        email = request.form['mail']
        password = request.form['password']
        confirm_password = request.form['confirm-password']
        cursor = mysql.connection.cursor(MySQLdb.cursors.DictCursor)
        cursor.execute('SELECT * FROM details WHERE username= %s',(username,))
        account = cursor.fetchone()

        if account:
            msg = f'{username} already exist please enter an another username'
            return render_template('sign-up.html',msg = msg)
        elif not re.match(r'[^@]+@[^@]+\.[^@]+', email):
            msg = 'Enter the valid email id'
            return render_template('sign-up.html',msg = msg)
        elif not re.match( "^(?=.*[a-z])(?=.*[A-Z])(?=.*\d)(?=.*[@$!%*#?&])[A-Za-z\d@$!#%*?&]{6,20}$", password):
            msg = 'password must be at least 8 character and on special character and one capital letter'
            return render_template('sign-up.html',msg = msg)
        elif password !=confirm_password:
            msg = 'Password and confirm_password must be equal'
            return render_template('sign-up.html',msg = msg)
        elif not username or not password or not email:
            msg = 'Please fill out the form!'
            return render_template('sign-up.html',msg = msg)
        else:
            cursor.execute('Create table if not exists details(username varchar(150),email varchar(150),password varchar(150))')
            cursor.execute('insert into details value(%s,%s,%s)',(username,email,password))
            mysql.connection.commit()
            return render_template('sign-in.html')
    return render_template('sign-up.html')

if __name__ =='__main__':
    app.run(debug=True)
```

7.2 FEATURE 2

send_mail.py

```python

import smtplib, ssl
## email.mime subclasses
from email.mime.multipart import MIMEMultipart
from email.mime.text import MIMEText
## The pandas library is only for generating the current date, which is not necessary for sending emails
import pandas as pd

# Define the HTML document
def send_email(email):
    html = '''
        <h1 style='color:white; text-align:center;background-color:green;padding:8px 10px;border-radius:3px'>You are Eligible to Apply </h1>
        <img src='https://www.pngmart.com/files/1/Blushing-Emoji-PNG-File.png' style='margin-left:20%' width='150px' height = '150px'>
        <p style="text-align:center;">Thank you for visiting our website. Hope you had a great experience</p>
        '''

    # Set up the email addresses and password. Please replace below with your email address and password
    email_from = 'gcesuaep@gmail.com'
    password = 'terc awcj webf raiv'
    email_to = email

    # Generate today's date to be included in the email Subject
    date_str = pd.Timestamp.today().strftime('%Y-%m-%d')

    # Create a MIMEMultipart class, and set up the From, To, Subject fields
    email_message = MIMEMultipart()
    email_message['From'] = email_from
    email_message['To'] = email_to
    email_message['Subject'] = f'Prediction Report Email- {date_str}'

    # Attach the html doc defined earlier, as a MIMEText html content type to the MIME message
    email_message.attach(MIMEText(html, "html"))
    # Convert it as a string
    email_string = email_message.as_string()

    # Connect to the Gmail SMTP server and Send Email
    context = ssl.create_default_context()
    with smtplib.SMTP_SSL("smtp.gmail.com", 465, context=context) as server:
        server.login(email_from, password)
        server.sendmail(email_from, email_to, email_string)

def fail_mail(email):
    html = '''
        <h1 style='color:white; text-align:center;background-color:green;padding:8px 10px;border-radius:3px'>You are not Eligible to Apply </h1>
        <img src='https://i.pinimg.com/564x/6b/91/e5/6b91e55e2ff7ca9133f7a25fba2d5b23.jpg' style='margin-left:20%' width='150px' height = '150px'>
        <p style="text-align:center;">Thank you for visiting our website. Hope you had a great experience</p>
        '''

    # Set up the email addresses and password. Please replace below with your email address and password
    email_from = 'gcesuaep@gmail.com'
    password = 'terc awcj webf raiv'
    email_to = email

    # Generate today's date to be included in the email Subject
    date_str = pd.Timestamp.today().strftime('%Y-%m-%d')

    # Create a MIMEMultipart class, and set up the From, To, Subject fields
    email_message = MIMEMultipart()
    email_message['From'] = email_from
    email_message['To'] = email_to
    email_message['Subject'] = f'Prediction Report Email- {date_str}'
    email_message['Subject'] = f'Prediction Report Email- {date_str}'

    # Attach the html doc defined earlier, as a MIMEText html content type to the MIME message
    email_message.attach(MIMEText(html, "html"))
    # Convert it as a string
    email_string = email_message.as_string()

    # Connect to the Gmail SMTP server and Send Email
    context = ssl.create_default_context()
    with smtplib.SMTP_SSL("smtp.gmail.com", 465, context=context) as server:
        server.login(email_from, password)
        server.sendmail(email_from, email_to, email_string)

def linear_mail(email,predict):
    html = f'''

        <img src='https://www.tenforce.com/wp-content/uploads/2020/08/undraw_approve_qwp7-e1603987686875.png' style='margin-left:20%' width='150px' height = '150px'>
        <h1 style='color:white; text-align:center;background-color:green;padding:8px 10px;border-radius:3px'>Your chance of eligibility is : </h1>
        <h3 style="text-align:center;font-size:24px;color:Green;padding:10px">{predict}</h3>
        <p style="text-align:center;">Thank you for visiting our website. Hope you had a great experience</p>

        '''

    # Set up the email addresses and password. Please replace below with your email address and password
    email_from = 'gcesuaep@gmail.com'
    password = 'terc awcj webf raiv'
    email_to = email

    # Generate today's date to be included in the email Subject
    date_str = pd.Timestamp.today().strftime('%Y-%m-%d')

    # Create a MIMEMultipart class, and set up the From, To, Subject fields
    email_message = MIMEMultipart()
    email_message['From'] = email_from
    email_message['To'] = email_to
    email_message['Subject'] = f'Prediction Report Email- {date_str}'
    # Attach the html doc defined earlier, as a MIMEText html content
    # type to the MIME message
    email_message.attach(MIMEText(html, "html"))
    # Convert it as a string
    email_string = email_message.as_string()

    # Connect to the Gmail SMTP server and Send Email
    context = ssl.create_default_context()
    with smtplib.SMTP_SSL("smtp.gmail.com", 465, context=context) as server:
        server.login(email_from, password)
        server.sendmail(email_from, email_to, email_string)

```

7.3 DATABASE SCHEMA



CHAPTER 8
TESTING

8.1 TEST CASES

Test case ID	Feature Type	Component	Test Scenario	Pre-Requisite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Commnets
LoginPage_TC_OO1	UI	Home Page	Verify user is able to see the Login/Signup popup when user clicked on My account button		1.Enter URL and click go 2.Verify login/Singup popup displayed or not 3.If you want view your score 4.Click to see Eligible button	http://127.0.0.1:5000/	Application should show below UI elements: a.navbar which contain sign-in button and about link button b.Click to You are Eligible Button c.About Our project d.Our team member details e.Footer	Working as expected	Pass	
LoginPage_TC_OO2	UI	Home Page	Click the button to view user eligible precentage		1.Enter URL and click go 2.Click on 'Click to find you are Eligible' 3.If User click it will return to predict page: 4.Without Login	http://127.0.0.1:5000/predict	Application should show below UI elements: a.GRE test box b.Toefl text box c.university rating text box d.Sop text box e.Lor text Box d.Cgpa Text box d.Research Drop down box	Working as expected	Pass	
LoginPage_TC_OO3	Functional	Login page	Verify user is able to log into application with Valid credentials		1.Enter URL(https://shopenzer.com/) and click go 2.Click on Sign-in option 3.Enter Valid username/email in Email text box 4.Enter valid password in password text box 5.Click on login button	Username: vvigneshs157@gmail.com password: Vikki@12345	User should navigate to user account Predict page	Working as expected	Pass	
LoginPage_TC_OO4	Functional	Register page	Enter a username ,email, password,confirm password		1.Enter URL and click go 2.Click on sign in option 3.It will go to the login page 4.I you are not the user click the Sign up button below 5.Resgiter Page will return 6.Enter all the credential And Click register		Application should return Register page a.Username Text Box b.email Text Box c.Password text box d.Confirm Password Text Box	Working as expected	Pass	
LoginPage_TC_OO4	Functional	Register page	Verify the email format is correect		1.Enter URL and click go 2.Click on sign in option 3.It will go to the login page 4.I you are not the user click the Sign up button below 5.Resgiter Page will return 6.Enter all the credential And Click register	Email:vvigneshs157gmail.com	Application should show 'Enter a valid Email Address '	Working as expected	Pass	
LoginPage_TC_OO5	Functional	Register page	verify the password and the confirm password are match		1.Enter URL and click go 2.Click on sign in option 3.It will go to the login page 4.I you are not the user click the Sign up button below 5.Resgiter Page will return 6.Enter all the credential And Click register	password:Vikki@12345 confirm password:vikki@12345	Application should show 'password and confirm password is not match'	Working as expected	Pass	
	Functional	sign in page	Verify username and password are present in the database		1.Enter URL and click go 2.Click on sign in option 3.It will go to the login page 4.Enter username and password	username:Vignesh confirm_password:vikki@12346	Application should show 'Username and password is mis match"	Working as expected	Pass	
	Functional	Predict page	Verify username and password are present in the database		1.Enter URL and click go 2.Click on sign in option 3.It will go to the login page 4.Enter username and password 5.click the sign_in button 6.Return Predict Page	username:Vignesh confirm_password:Vikki@12345	Application should show below UI elements: a.GRE test box b.Toefl text box c.university rating text box d.Sop text box e.Lor text Box d.Cgpa Text box d.Research Drop down box	Working as expected	Pass	
	UI & Functional	Success Page And send success email	Check whether the result is success		1.Enter URL and click go 2.Click on sign in option 3.It will go to the login page 4.Enter username and password 5.click the sign_in button 6.Click the predict button Predict Page	GRE marks,toefl marks, university rating, sop mark ,lor marks,cgpa,Research	Application should return the suucess page,send succes email to respected email the enter by the user	Working as expected	Pass	
	UI & Functional	Fail Page And send success email	Check whether the result is Fail		1.Enter URL and click go 2.Click on sign in option 3.It will go to the login page 4.Enter username and password 5.click the sign_in button 6.Click the predict button Predict Page	GRE marks,toefl marks, university rating, sop mark ,lor marks,cgpa,Research	Application should return the Fail page,send Fail email to respected email the enter by the user	Working as expected	Pass	

8.2 USER ACCEPTANCE TESTING

1. Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the University Admit Eligibility Predictor project at the time of the release to User Acceptance Testing (UAT).

2. Defect Analysis

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	10	5	3	2	20
Duplicate	2	0	1	0	3
External	3	3	0	0	6
Fixed	12	6	3	2	23
Not Reproduced	3	2	0	0	5
Skipped	0	0	1	0	1
Won't Fix	0	0	0	0	0
Totals	30	16	8	4	58

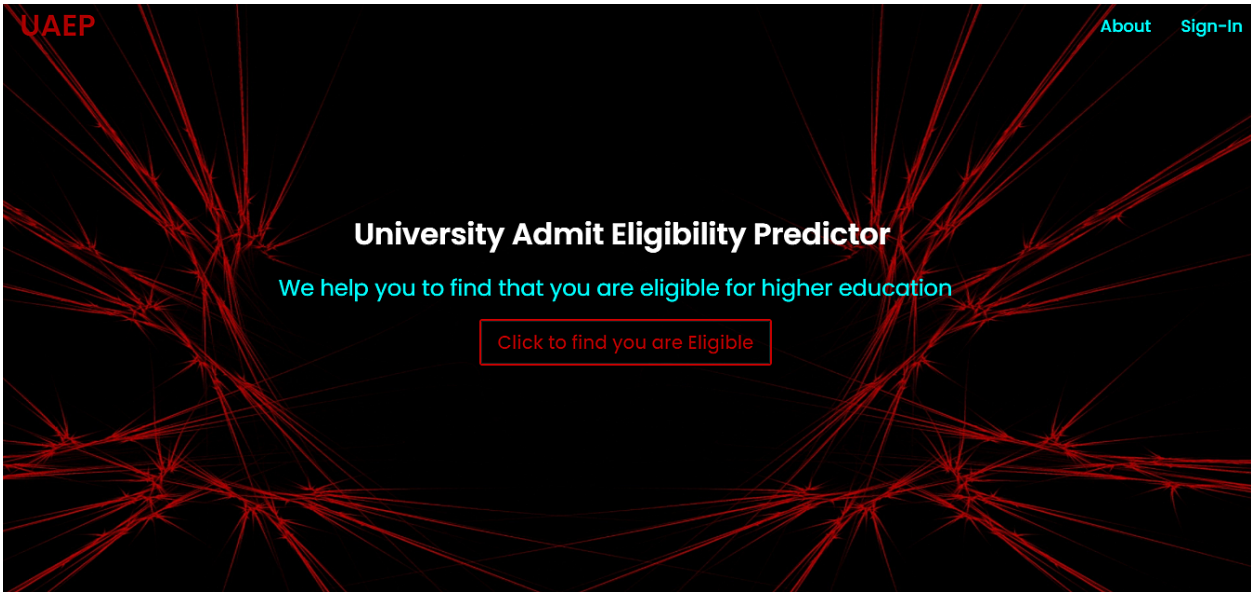
3. Test Case Analysis

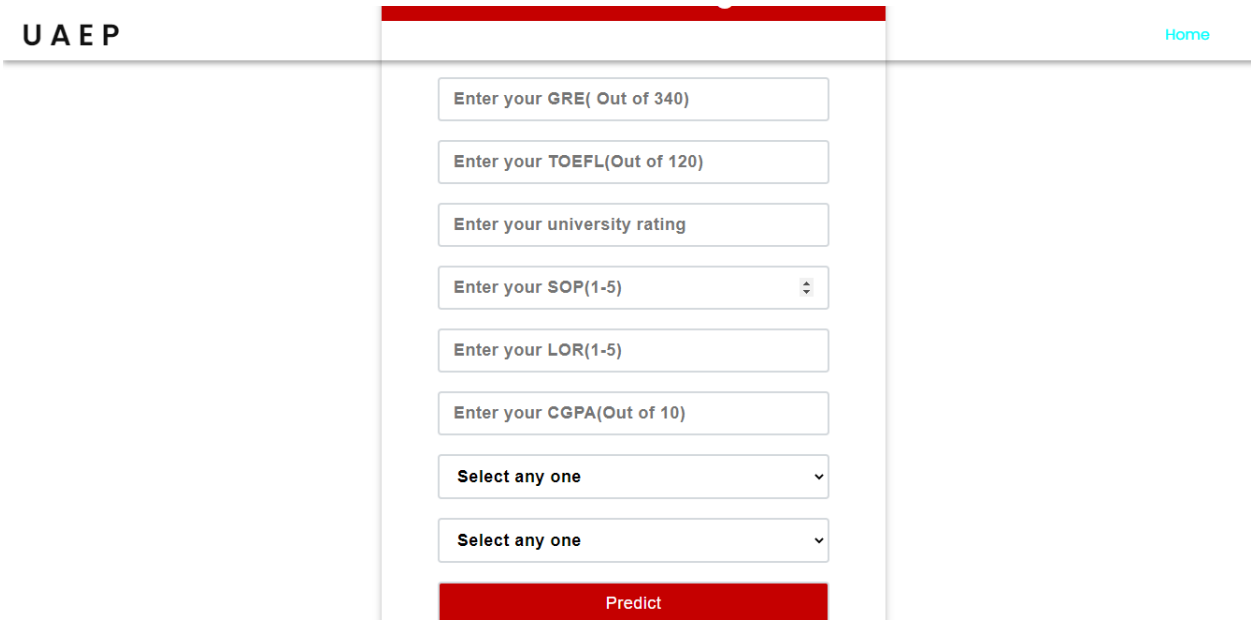
This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
View Home Page	5	0	0	5
View Prediction Page	5	0	0	5
Enter the Scores	15	0	0	15
View Success Results	8	0	0	8
View Failure Results	7	0	0	7
Version Control	3	0	0	3

CHAPTER 9
RESULTS

9.1 PERFORMANCE METRICS





UAEP Home logout

Predicting the chance of admission:

Congratulations. You have a chance.

Copyright © All right reserved

UAEP Home logout

Predicting the chance of admission:

Sorry. You don't have a chance.

Copyright © All right reserved

CHAPTER 10
ADVANTAGES & DISADVANTAGES

ADVANTAGES

- It helps student for making decision for choosing a right college.
- Here the chance of occurrence of error is less when compared with existing system.
- It is fast, efficient and reliable.
- Avoids data redundancy and inconsistency.
- It would be the easiest mode to predict the university/colleges person is applicable for as well as it would unbiased and totally transparent.
- Individually would no more need to depend upon the consultancies who may be slightly deviated towards the list of colleges/university that may be having contract with them.

DISADVANTAGES

- Required active internet connection.
- System will provide inaccurate results if data entered incorrectly.
- Other factors such as changes in policies by the university or by the country can also affect chances of admissions in a way that is beyond the scope of this project.
- Admissions also depend on the individual university's policy regarding the intake of foreign students and is not modeled by our system.

CHAPTER 11
CONCLUSION

Student admission problem is essential in educational institutions. In this project addresses machine learning models to predict the chance of a student to be admitted. This will assist students to know in advance if they have a chance to get accepted. In this paper, machine learning models were performed to predict the opportunity of a student to get admitted to their favourite universities.

CHAPTER 12
FUTURE SCOPE

The future scope of this project is enormous. Few of them are:

- This can be implemented in less time for proper admission process.
- This can be accessed anytime anywhere, since it is a web application provided only an internet connection.
- The user had not need to travel a long distance for the admission and his/her time is also saved as a result of this automated system.
- The scope of this project is a web application that allows users to enter their academic data and get predictions of their chances of admissions in the university tier of their choosing.
- It also provides an analysis based on the data set used that shows how the different scores affect chances of admissions.
- A Database will also be implemented for the system so that students can save their data and review and edit it as they progress with the most recent predictions being saved with their profile.

CHAPTER 13
APPENDIX

13.1 SOURCE CODE

Index

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UAEP</title>
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/owl-carousel/1.3.3/owl.carousel.min.css">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/owl-carousel/1.3.3/owl.theme.min.css">
    <script type="text/javascript" src="https://code.jquery.com/jquery-1.12.0.min.js"></script>
    <script type="text/javascript" src="https://cdnjs.cloudflare.com/ajax/libs/owl-carousel/1.3.3/owl.carousel.min.js"></script>
    <link rel="stylesheet" href="/static/css/home-style.css">
    <script src="/static/js/owl-carousel.js"></script>
    <script src="/static/js/script.js"></script>
</head>
<body>
    <div class="navbar">
        <div class="nav-container">
            <h3 class="nav-icon">UAEP</h3>
            <div class="nav-content">
                <ul>
                    <li><a href="#about-us">About</a></li>
                    <li><a href="/loginpage">Sign-In</a></li>
                </ul>
            </div>
        </div>
    </div>
    <div class="home">
        <div class="home-container">
            <img src="/static/images/homeback.jpg">
            <h3 class="title-home">
                University Admit Eligibility Predictor
            </h3>
            <p class="home-content">
                We help you to find that you are eligible for higher education
            </p>
            <a href="/predict">
                Click to find you are Eligible
```

```
                Click to find you are Eligible
            </a>
        </div>
    </div>
    <div class="about-us" id = 'about-us'>
        <div class="container">
            <h3>
                What we Do
            </h3>
            <p class="about-us-content">
                UAEP is a new web-based University Admissions Predictor.It is an AI based application that asks for the users to input their academic transcripts data and
            </p>

        </div>
    </div>
     <div class="about" id="about">
        <div class="container">
            <div class="row">
                <div class="col-md-12">
                    <div id="testimonial-slider" class="owl-carousel">
                        <div class="testimonial">
                            <div class="pic">
                                <img src="/static/images/members/profile-img - Copy.jpg" alt="">
                            </div>
                            <h3 class="title">Team Leader</h3>
                            <p class="description">Aspiring data analyst with a strong math and statistics background; proficient in documenting, interpreting, and analyz
                            <div class="testimonial-content">
                                <div class="testimonial-profile">
                                    <h3 class="name">Ajith N</h3>
                                    <span class="post">ML Engineer</span>
                                </div>
                            </div>
                        </div>

                        <div class="testimonial">
                            <div class="pic">
                                <img src="/static/images/members/Picsart_22-10-29_23-21-32-398.jpg" alt="">
                            </div>
                            <h3 class="title">Team Members-1</h3>
                            <p class="description">Positive driven and confident web developer with an apt for learning new technology.Exceptionally creative and talented
                            <div class="testimonial-content">
```

```
                        <div class="testimonial-profile">
                            <h3 class="name">Madhan Prakash T</h3>
                            <span class="post">Web Designer</span>
                        </div>
                    </div>
                </div>
                <div class="testimonial">
                    <div class="pic">
                        <img src="/static/images/members/Vignesh.jpg" alt="">
                    </div>
                    <h3 class="title">Team Member-2</h3>
                    <p class="description">Computer Engineer with solid coding background and exceptional ability to apply cutting edge UI frameworks (Angular, Re
                    <div class="testimonial-content">
                        <div class="testimonial-profile">
                            <h3 class="name">Vignesh S</h3>
                            <span class="post">Web Developer</span>
                        </div>
                    </div>
                </div>
                <div class="testimonial">
                    <div class="pic">
                        <img src="/static/images/members/bahathraj.jpg" alt="">
                    </div>
                    <h3 class="title">Team Member-3</h3>
                    <p class="description">Creative data analyst with exceptional information gathering skills looking for a challenging opportunity to incorporat
                    <div class="testimonial-content">
                        <div class="testimonial-profile">
                            <h3 class="name">Baghatraj N</h3>
                            <span class="post">Data Analyst</span>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <section class="footer">
        <p class="footer-content">
            <a href="https://github.com/IBM-EPBL/IBM-Project-37700-1660318565"><i class="fa fa-github"></i></a>
            <p>Copyright <i class="fa fa-copyright"></i> All right reserved</p>
```

```
                    <div class="testimonial">
                        <div class="pic">
                            <img src="/static/images/members/Vignesh.jpg" alt="">
                        </div>
                        <h3 class="title">Team Member-2</h3>
                        <p class="description">Computer Engineer with solid coding background and exceptional ability to apply cutting edge UI frameworks (Angular, Re
                        <div class="testimonial-content">
                            <div class="testimonial-profile">
                                <h3 class="name">Vignesh S</h3>
                                <span class="post">Web Developer</span>
                            </div>
                        </div>
                    </div>
                    <div class="testimonial">
                        <div class="pic">
                            <img src="/static/images/members/bahathraj.jpg" alt="">
                        </div>
                        <h3 class="title">Team Member-3</h3>
                        <p class="description">Creative data analyst with exceptional information gathering skills looking for a challenging opportunity to incorporat
                        <div class="testimonial-content">
                            <div class="testimonial-profile">
                                <h3 class="name">Baghatraj N</h3>
                                <span class="post">Data Analyst</span>
                            </div>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <section class="footer">
        <p class="footer-content">
            <a href="https://github.com/IBM-EPBL/IBM-Project-37700-1660318565"><i class="fa fa-github"></i></a>
            <p>Copyright <i class="fa fa-copyright"></i> All right reserved</p>
        </p>
    </section>
</body>
</html>
```

Chance

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UAEP</title>
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/owl-carousel/1.3.3/owl.carousel.min.css">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/owl-carousel/1.3.3/owl.theme.min.css">
    <script type="text/javascript" src="https://code.jquery.com/jquery-1.12.0.min.js"></script>
    <script type="text/javascript" src="https://cdnjs.cloudflare.com/ajax/libs/owl-carousel/1.3.3/owl.carousel.min.js"></script>
    <link rel="stylesheet" href="/static/css/home-style.css">
    <script src="/static/js/owl-carousel.js"></script>
    <script src="/static/js/script.js"></script>
</head>
<body>
    <div class="navbar" style="background-color: black;">
        <div class="nav-container">
            <h3 class="nav-icon">UAEP</h3>
            <div class="nav-content">
                <ul>
                    <li><a href="/">Home</a></li>
                    <li><a href="/logout">logout</a></li>
                </ul>
            </div>
        </div>
    </div>
    <div class="success">
        <div class="success-content">
            <img id="success-img" src="/static/images/success.png" alt="success">
        </div>
        <div class="success-content">
            <div class="msg">
            <h3>Predicting the chance of admission:</h3>
            <br>
            <br>
            <span style="font-weight: 600;">Congratulations. You have a chance.</span>
            <p></p>
        </div>
        </div>
    </div>
    <div>
    <section class="footer">
        <p class="footer-content">
            <a href="https://github.com/IBM-EPBL/IBM-Project-37700-1660318565"><i class="fa fa-github"></i></a>
            <p>Copyright <i class="fa fa-copyright"></i> All right reserved</p>
        </p>
    </section>
    </div>
</body>
</html>
```

No Chance

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>UAEP</title>
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/owl-carousel/1.3.3/owl.carousel.min.css">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/owl-carousel/1.3.3/owl.theme.min.css">
    <script type="text/javascript" src="https://code.jquery.com/jquery-1.12.0.min.js"></script>
    <script type="text/javascript" src="https://cdnjs.cloudflare.com/ajax/libs/owl-carousel/1.3.3/owl.carousel.min.js"></script>
    <link rel="stylesheet" href="/static/css/home-style.css">
    <script src="/static/js/owl-carousel.js"></script>
    <script src="/static/js/script.js"></script>
</head>
<body>
    <div class="navbar" style="background-color: black;">
        <div class="nav-container">
            <h3 class="nav-icon">UAEP</h3>
            <div class="nav-content">
                <ul>
                    <li><a href="/">Home</a></li>
                    <li><a href="/logout">logout</a></li>
                </ul>
            </div>
        </div>
    </div>
    <div class="success">
        <div class="success-content">
            <img id="fail-img" src="/static/images/sorry.png" alt="success">
        </div>
        <div class="success-content">
            <div class="Msg">
            <h3>Predicting the chance of admission:</h3>
            <br>
            <p>{{predict_value}}</p>
            <br>
            <span style="font-weight: 600;">Sorry. You don't have a chance.</span> </p>
            </div>
        </div>
    </div>
    <div>
    <section class="footer">
        <p class="footer-content">
            <a href="http://"><i class="fa fa-github"></i></a>
            <a href="http://"><i class="fa fa-twitter"></i></a>
            <a href="http://"><i class="fa fa-facebook"></i></a>
            <p>Copyright <i class="fa fa-copyright"></i> All right reserved</p>
        </p>
    </section>
    </div>
</body>
</html>
```

13.2 GITHUB & PROJECT DEMO LINK

Github Link : https://github.com/IBM-EPBL/IBM-Project-37700-1660318565

Demo Link : https://drive.google.com/file/d/17l8JsX2zKgmRhXAEK8wmeQ3pquiPgCo-/view?usp=share_link