

UNIVERSITY ADMIT ELIGIBILITY PREDICTOR

PROJECT REPORT

SUBMITTED BY

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NATHAKADAIYUR-638108

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CHAPTER 1

INTRODUCTION

PROJECT OVERVIEW

The project is implemented using a Machine-Learning model that predicts whether the user is eligible for an admission in the selected rated universities with provided details such as marks and others. The algorithm works in such a way that when the user provides the details such as (GRE Score, TOEFL Score, University Rating, SOP, LOR, CGPA, Research) the percentage of chance of admit is displayed. The user is provided with a UI (Web based application) in which the user can enter the details mentioned above for prediction. The main advantage of this is that the user can avoid long process of having to check the eligibility of a university admission by himself and make use of this application to predict the eligibility / chance of admit.

PURPOSE

University and College research being one part of the university application process is itself an arduous and lengthy task. This issue is a big problem for students have not been solved till now. There are recognized sites which filter the best universities and colleges based on the location, tuition fees, major and degree but none of them have use machine learning algorithm to solve the issue.

Hence, we have done this research project to solve that issue to some extent with the use of data mining techniques

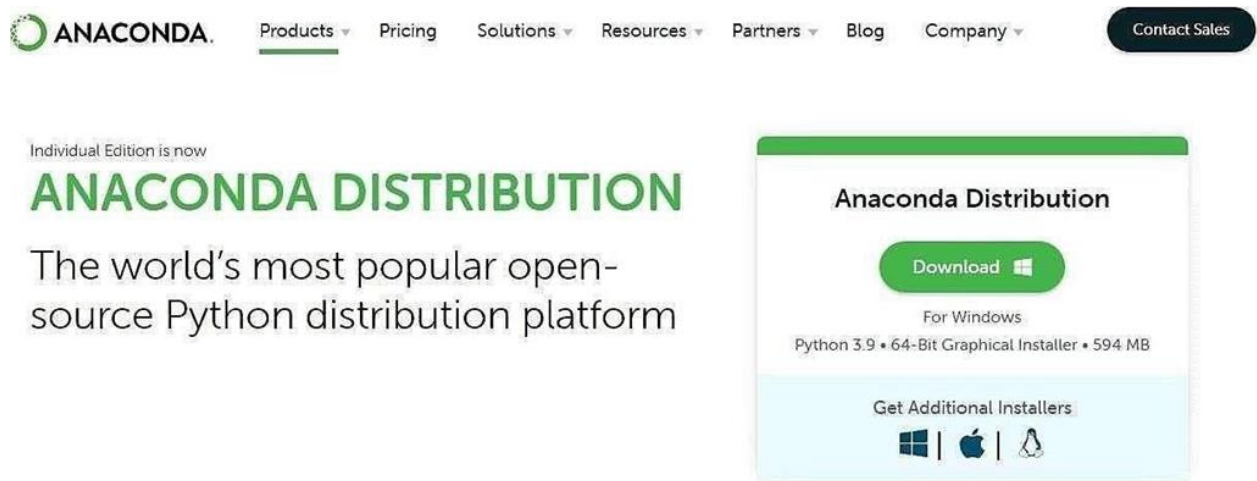
PRE-REQUISITES:

Anaconda Installation:

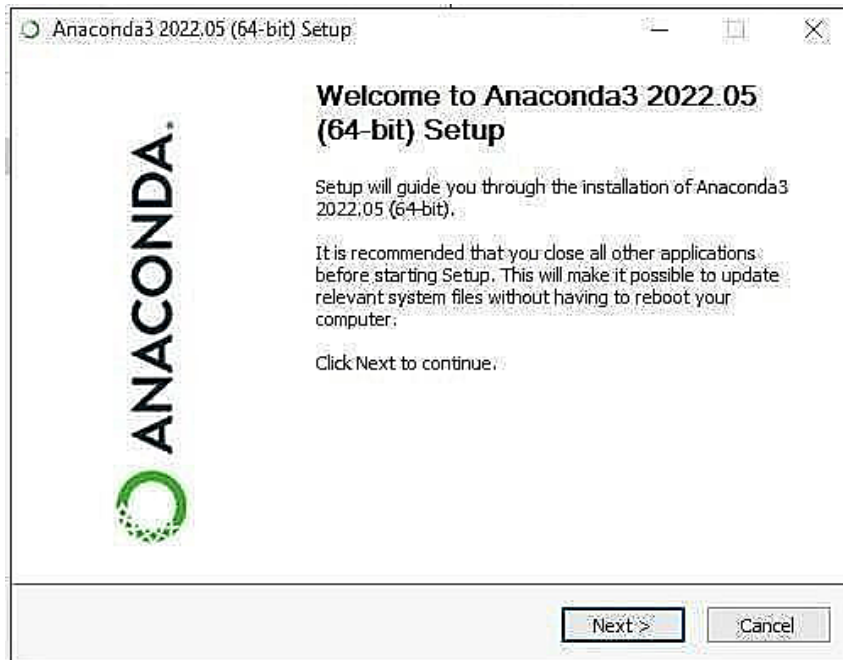
Anaconda is a distribution of the Python and R programming languages for scientific computing that aims to simplify package management and deployment. The distribution includes data science packages suitable for Windows, Linux, and macOS. Developed and maintained by Anaconda. Founded in 2012 by Peter Wang and Travis Olyphant. As Anaconda, also known as Anaconda Distribution or Anaconda Individual Edition, the company's other products include his Anaconda Team Edition and Anaconda Enterprise Edition, neither of which are free.

WAY TO INSTALL ANACONDA:

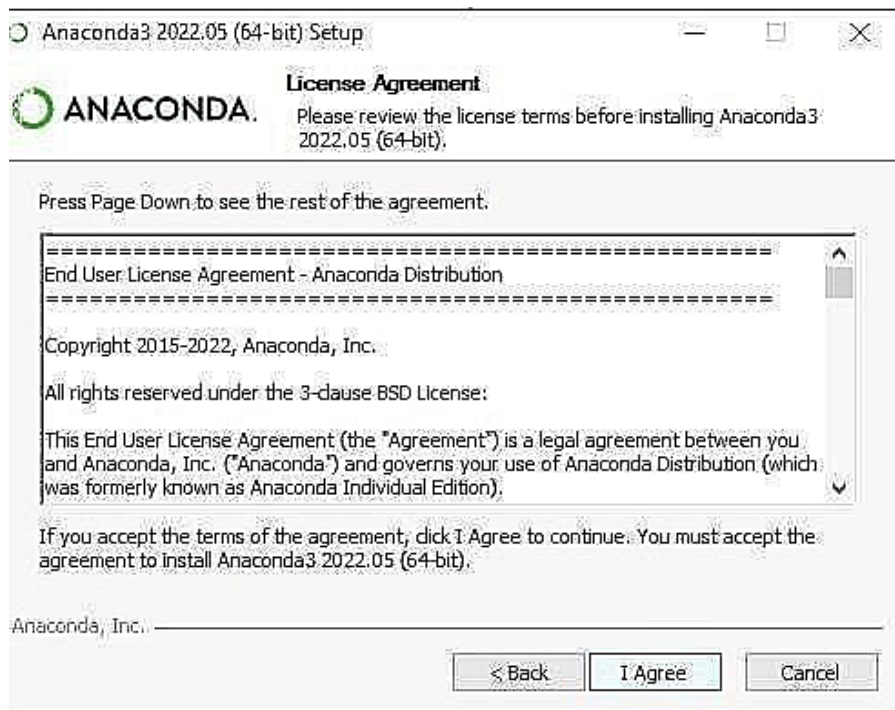
STEP1:Download and Anaconda



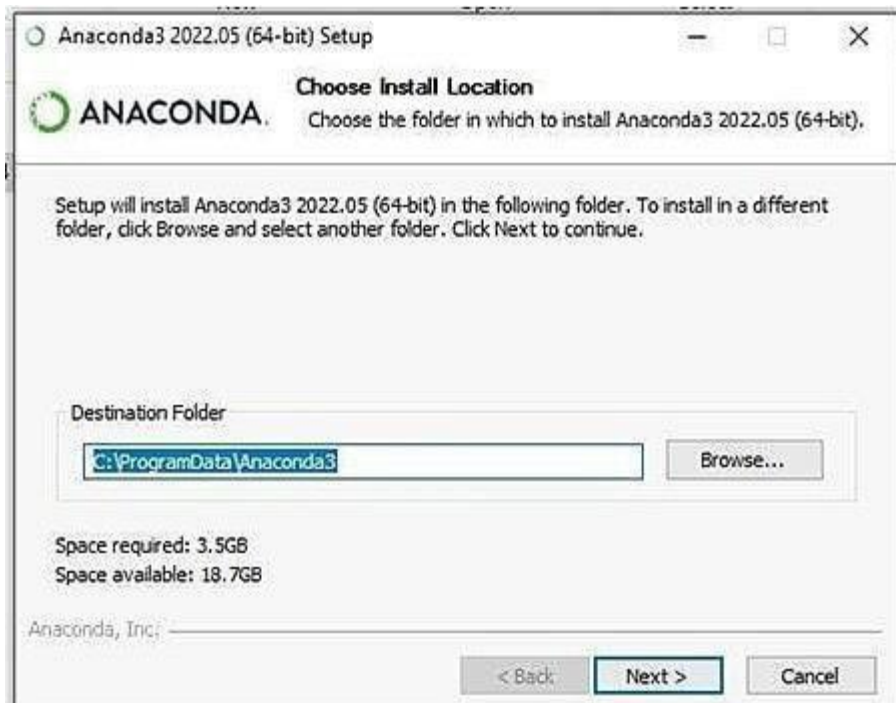
STEP2: Install the Anaconda



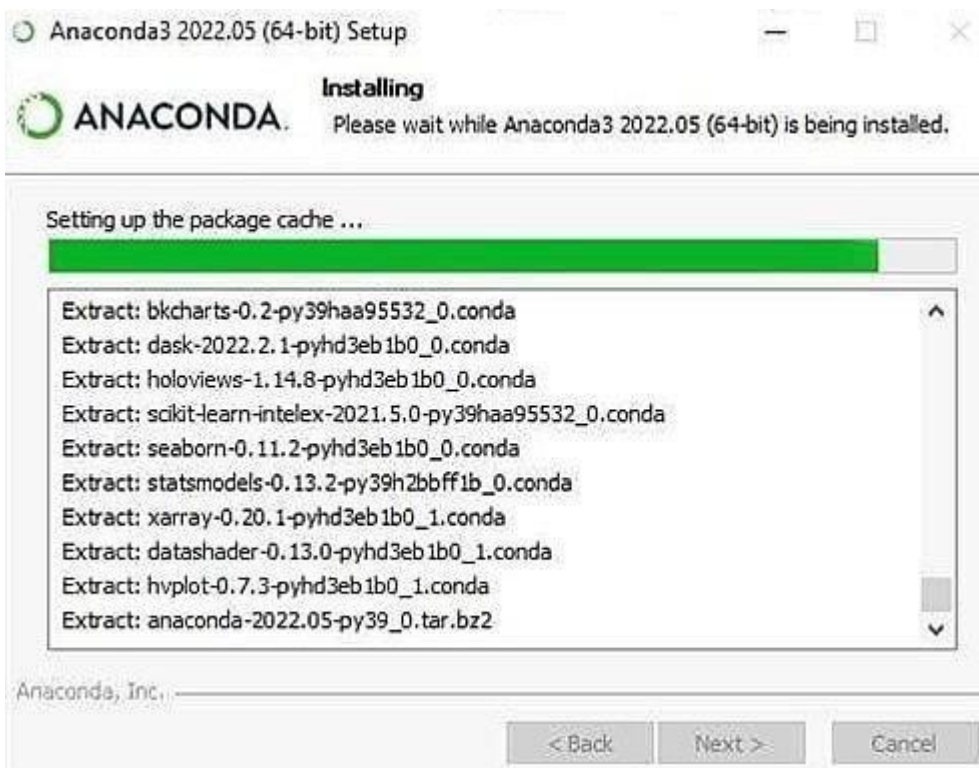
STEP3:Click I Agree



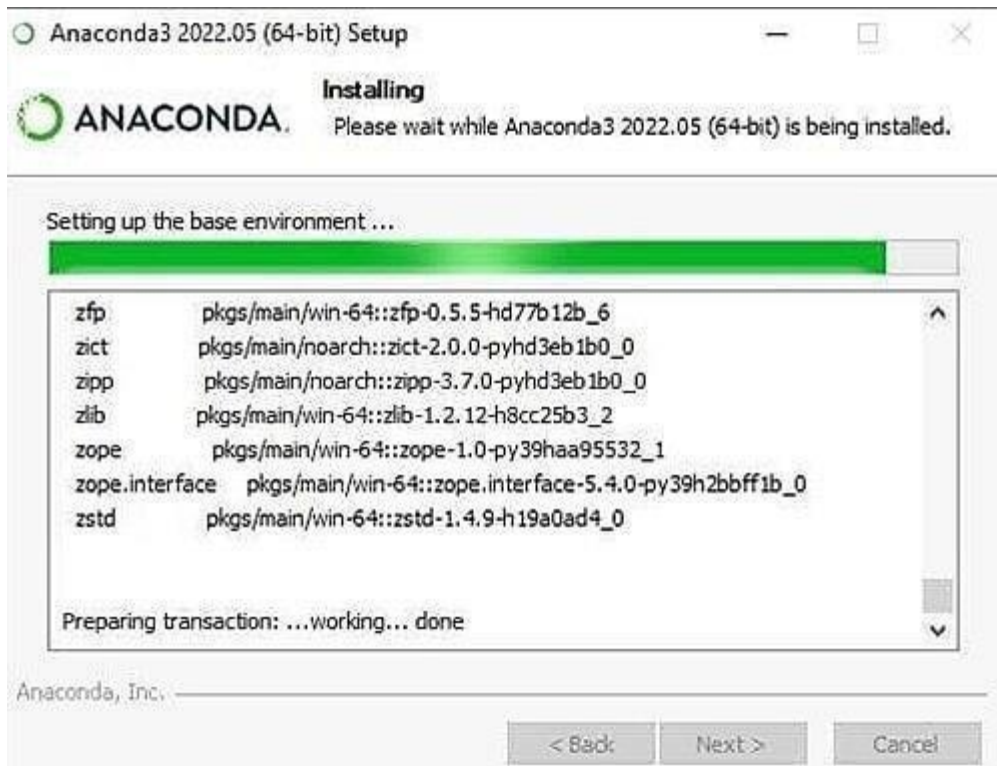
STEP4:Choose the Installation Location



STEP5:Installing the Requiring packages



STEP6:Setting up the base environment

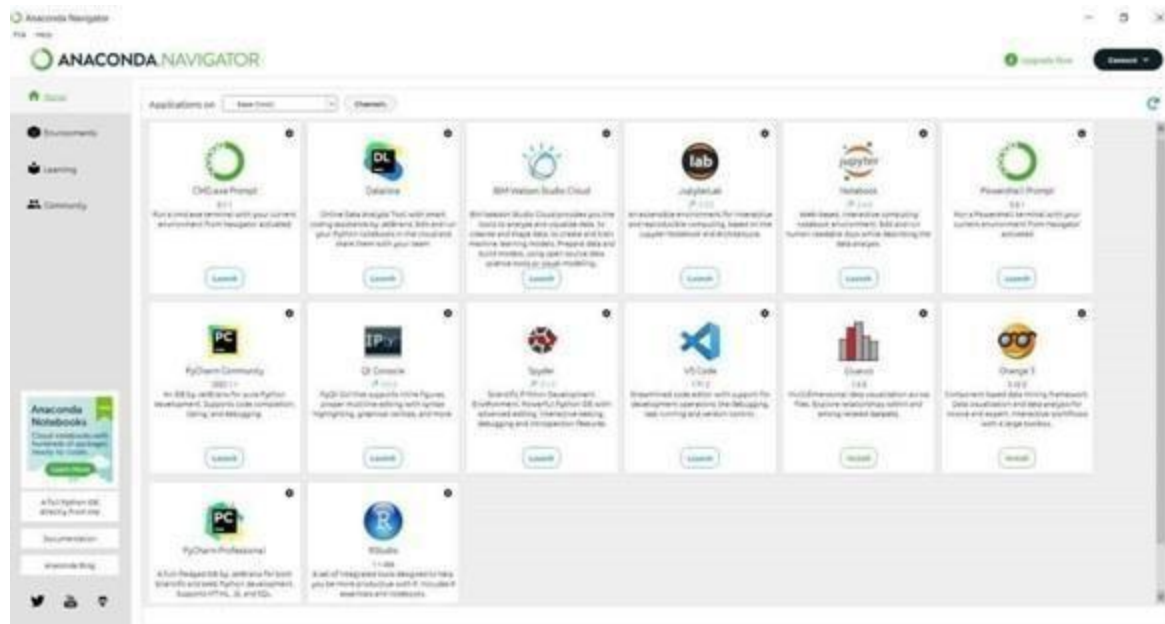


STEP7:Successfully Installed and check the Anaconda Navigator working or not

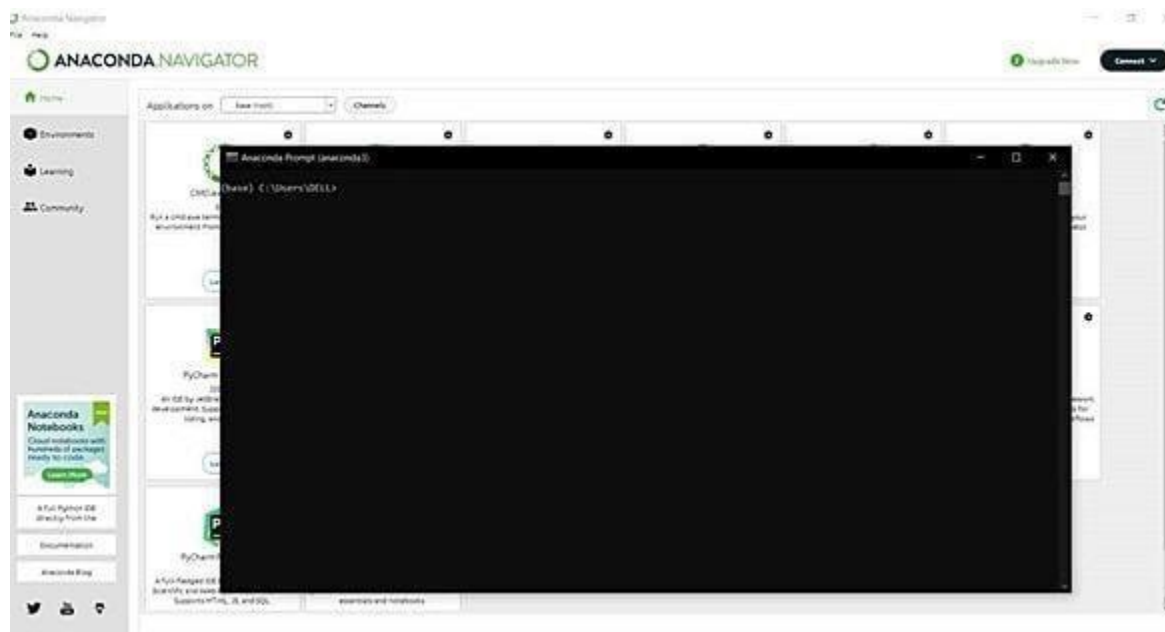


Python packages installation:

Step1:Open the anaconda navigator in the start menu



Step 2:Open the CMD.exe prompt



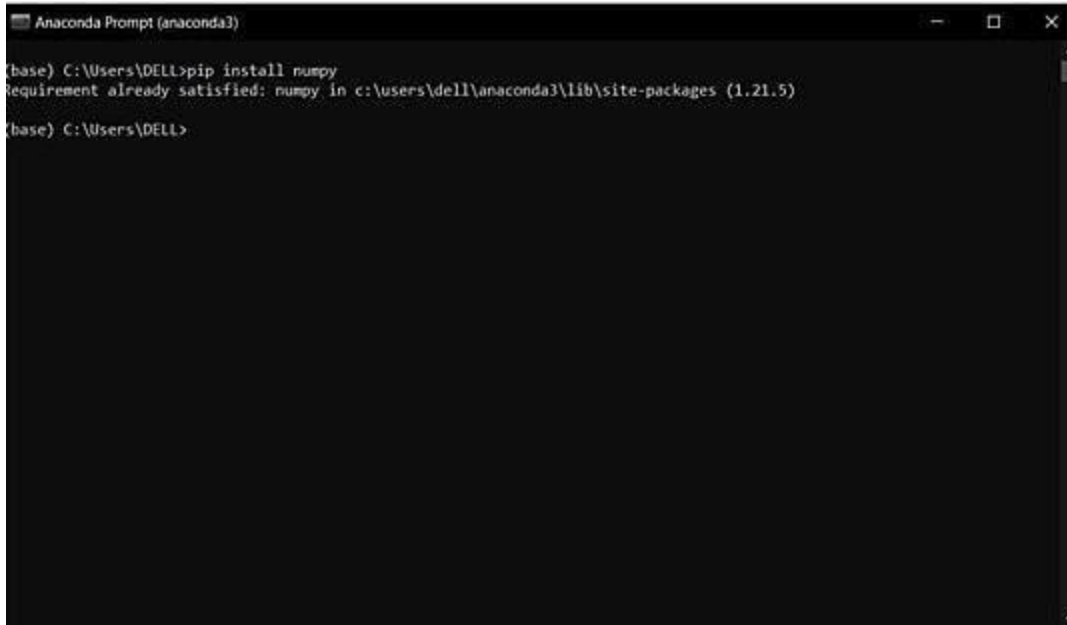
Step3:InstalltheNUMPYpackage

To enter the numpy package enter the command in the CMD.exe

Command:**Pipinstallnumpy**

Numpy:

This package is used to perform numerical computations. This package comes pre-installed with Anaconda. NumPy is used for manipulating arrays. NumPy stands for Numerical Python.



```
Anaconda Prompt (anaconda3)
(base) C:\Users\DELL>pip install numpy
Requirement already satisfied: numpy in c:\users\dell\anaconda3\lib\site-packages (1.21.5)
(base) C:\Users\DELL>
```

Step4:Installthepandaspackage.

To Enter the Pandas Package enter the command in the CMD.exe Command:

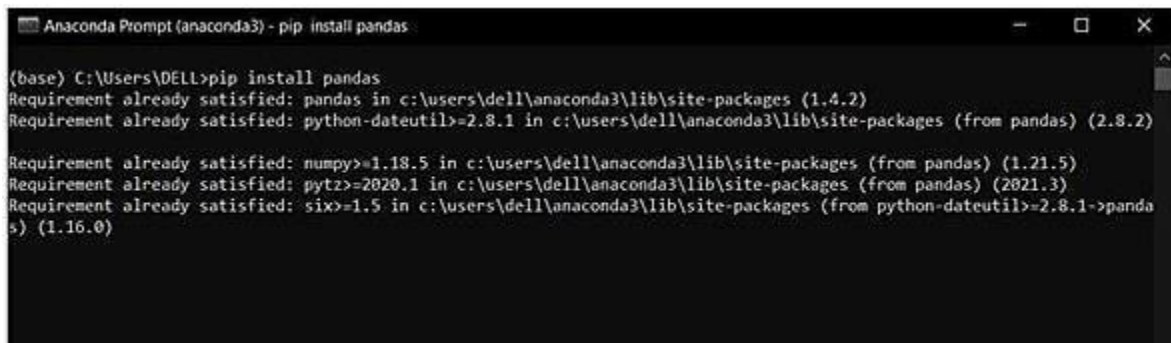
Pipinstallpandas

Pandas:

Pandas is one of the most widely used Python libraries for data science. It provides powerful and easy-to-use structure and data analysis tools. This package comes pre-installed with Anaconda. An open source library built on top of the NumPy library.

A Python package that provides various data structures and operations for working with numerical data and time series. Mainly, it's common for data to be

imported and analyzed much easier. Pandas is fast, providing users with high performance and productivity.



```
Anaconda Prompt (anaconda3) - pip install pandas
(base) C:\Users\DELL>pip install pandas
Requirement already satisfied: pandas in c:\users\dell\anaconda3\lib\site-packages (1.4.2)
Requirement already satisfied: python-dateutil>=2.8.1 in c:\users\dell\anaconda3\lib\site-packages (from pandas) (2.8.2)
Requirement already satisfied: numpy>=1.18.5 in c:\users\dell\anaconda3\lib\site-packages (from pandas) (1.21.5)
Requirement already satisfied: pytz>=2020.1 in c:\users\dell\anaconda3\lib\site-packages (from pandas) (2021.3)
Requirement already satisfied: six>=1.5 in c:\users\dell\anaconda3\lib\site-packages (from python-dateutil>=2.8.1->pandas) (1.16.0)
```

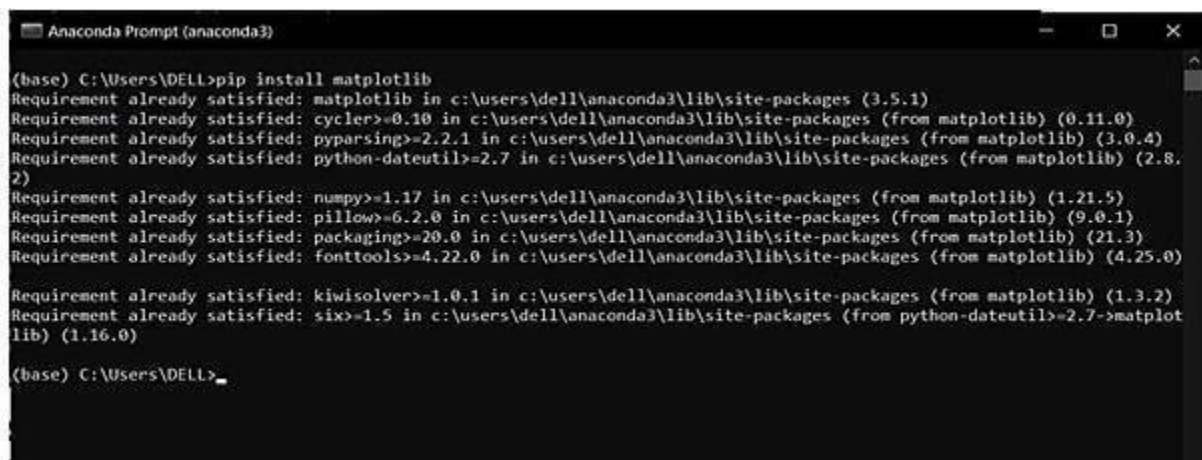
Step5: Install the Matplotlib package.

To enter the Matplotlib package enter the command in the CMD.exe

Command: **Pip install Matplotlib**

Matplotlib:

Matplotlib is a comprehensive library for creating static, animated and interactive visualizations in Python. This package comes pre-installed with Anaconda. Matplotlib is a nice visualization library in Python for 2D plotting of arrays. Matplotlib is a cross-platform data visualization library based on NumPy arrays and designed to work with the wider SciPy stack. Introduced by John Hunter in 2002.



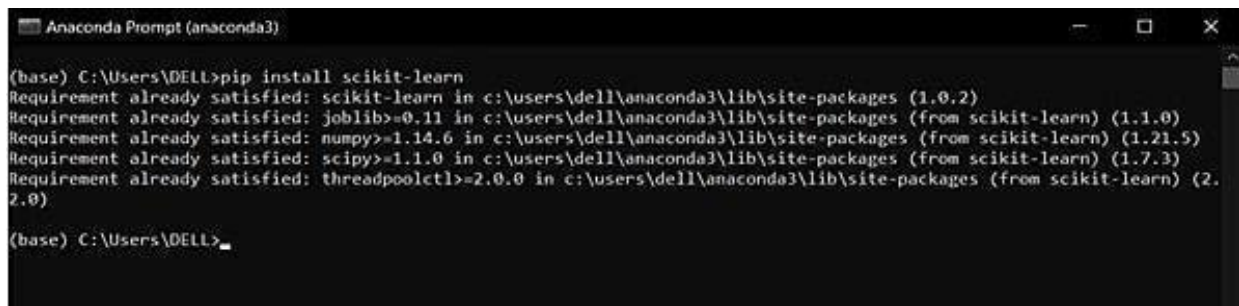
```
Anaconda Prompt (anaconda3)
(base) C:\Users\DELL>pip install matplotlib
Requirement already satisfied: matplotlib in c:\users\dell\anaconda3\lib\site-packages (3.5.1)
Requirement already satisfied: cycler>=0.10 in c:\users\dell\anaconda3\lib\site-packages (from matplotlib) (0.11.0)
Requirement already satisfied: pyparsing>=2.2.1 in c:\users\dell\anaconda3\lib\site-packages (from matplotlib) (3.0.4)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\dell\anaconda3\lib\site-packages (from matplotlib) (2.8.2)
Requirement already satisfied: numpy>=1.17 in c:\users\dell\anaconda3\lib\site-packages (from matplotlib) (1.21.5)
Requirement already satisfied: pillow>=6.2.0 in c:\users\dell\anaconda3\lib\site-packages (from matplotlib) (9.0.1)
Requirement already satisfied: packaging>=20.0 in c:\users\dell\anaconda3\lib\site-packages (from matplotlib) (21.3)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\dell\anaconda3\lib\site-packages (from matplotlib) (4.25.0)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\dell\anaconda3\lib\site-packages (from matplotlib) (1.3.2)
Requirement already satisfied: six>=1.5 in c:\users\dell\anaconda3\lib\site-packages (from python-dateutil>=2.7->matplotlib) (1.16.0)
(base) C:\Users\DELL>
```

Step6:Install the Scikit-learn package.

To enter the Scikit-learn package enter the command in the CMD.exe Command:**Pip installScikit-learn**

Scikit-learn:

This is a machine learning library for the Python programming language. This package comes pre-installed with Anaconda. Scikit Learn in Python is primarily used to focus on modeling in Python. It was only focused on modeling, not loading data.

A screenshot of the Anaconda Prompt (anaconda3) window. The terminal shows the command `(base) C:\Users\DELL>pip install scikit-learn` being executed. The output indicates that the requirement is already satisfied, listing the installed versions of scikit-learn (1.0.2), joblib (1.1.0), numpy (1.21.5), scipy (1.7.3), and threadpoolctl (2.2.0). The prompt then returns to `(base) C:\Users\DELL>`.

```
Anaconda Prompt (anaconda3)
(base) C:\Users\DELL>pip install scikit-learn
Requirement already satisfied: scikit-learn in c:\users\dell\anaconda3\lib\site-packages (1.0.2)
Requirement already satisfied: joblib>=0.11 in c:\users\dell\anaconda3\lib\site-packages (from scikit-learn) (1.1.0)
Requirement already satisfied: numpy>=1.14.6 in c:\users\dell\anaconda3\lib\site-packages (from scikit-learn) (1.21.5)
Requirement already satisfied: scipy>=1.1.0 in c:\users\dell\anaconda3\lib\site-packages (from scikit-learn) (1.7.3)
Requirement already satisfied: threadpoolctl>=2.0.0 in c:\users\dell\anaconda3\lib\site-packages (from scikit-learn) (2.2.0)
(base) C:\Users\DELL>
```

Step7:Install the Flask package.

To enter the Flask package enter the command in the CMD.exe Command:**PipinstallFlask**

Flask:

Flask is a lightweight WSGI web application framework Flask is a web application framework written in Python. It is developed by Armin Ronacher, who leads an international group of Python enthusiasts called Pocco. Flask is based on the WSGI toolkit tools and the Jinja2 template engine. Both are Pocco projects.

```
Anaconda Prompt (anaconda3)

(base) C:\Users\DELL>pip install scikit-learn
Requirement already satisfied: scikit-learn in c:\users\dell\anaconda3\lib\site-packages (1.0.2)
Requirement already satisfied: joblib>=0.11 in c:\users\dell\anaconda3\lib\site-packages (from scikit-learn) (1.1.0)
Requirement already satisfied: numpy>=1.14.6 in c:\users\dell\anaconda3\lib\site-packages (from scikit-learn) (1.21.5)
Requirement already satisfied: scipy>=1.1.0 in c:\users\dell\anaconda3\lib\site-packages (from scikit-learn) (1.7.3)
Requirement already satisfied: threadpoolctl>=2.0.0 in c:\users\dell\anaconda3\lib\site-packages (from scikit-learn) (2.2.0)

(base) C:\Users\DELL>
```

CHAPTER 2

LITERATURE SURVEY

Related Work:

A considerable number of researches and studies have been done on graduation admission datasets using several types of machine learning algorithms. One impressive work by Acharya et al. has compared between 4 different regression algorithms, which are: Linear Regression, Support Vector Regression, Decision Trees, Random Forest, to predict the chance of admit based on the best model that showed the least MSE which was multilinear regression. In addition, Chakrabarty et al. compared between both linear regression and gradient boosting regression in predicting chance of admit; point out that gradient boosting regression showed better results. Gupta et al. developed a model that studies the graduate admission process in American universities using machine learning techniques. The purpose of this study was to guide students in finding the best educational institution to apply for. Five machine learning models were built in this paper including SVM (Linear Kernel), AdaBoost, and Logistic classifiers. Waters and Miikkulainen proposed a remarkable article that helps in ranking graduation admission application according to the level of acceptance and enhances the performance of reviewing applications using statistical machine learning. Sujay applied linear regression to predict the chance of admitting graduate students in master's programs as a percentage. However, no more models were performed.

References:

1. M. S. Acharya, A. Armaan, and A. S. Antony, "A comparison of regression models for prediction of graduate admissions," ICCIDS 2019 - 2nd Int. Conf. Compute. Intell. Data Sci. Proc., pp. 1–5, 2019.

2.N. Chakrabarty, S. Chowdhury, and S. Rana, “A Statistical Approach to Graduate Admissions’ Chance Prediction,” no. March, pp. 145–154,2020.

3. N. Gupta, A. Sawhney, and D. Roth, “Will I Get in? Modeling the Graduate Admission Process for American Universities,” IEEE Int. Conf.Data Min. Work. ICDMW, vol. 0, pp. 631–638, 2016.

4.A. Waters and R. Mikkilineni, “GRADE: Graduate Admissions,” pp. 64–75, 2014.

5. S. Sujay, “Supervised Machine Learning Modelling & Analysis for Graduate Admission Prediction,” vol. 7, no. 4, pp. 5–7, 2020.

Conclusion:

The main objective of this research was to develop a prototype of the system that can be used by the students aspiring to pursue their education in their dreamed universities. The model can be used by the students for evaluating their chances of getting shortlisted in a particular university with an average accuracy of 75%. It will help the students to make better and faster decisions regarding application to universities.

CHAPTER 3

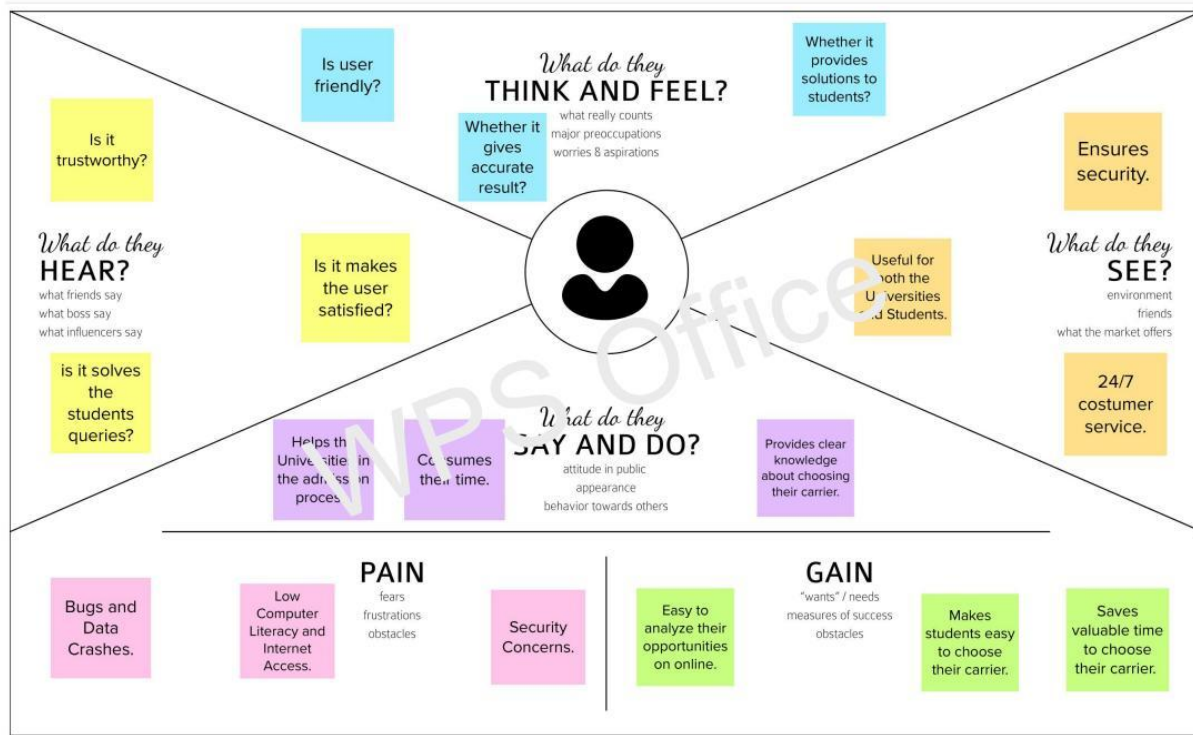
IDEATION & PROPOSED SOLUTION

EMPATHY MAP CANVAS:

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes.

It is a useful tool to help teams better understand their users. Creating an effective solution requires understanding the true problem and the person who is experiencing it.

This exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges



IDEATION & BRAINSTORMING:

1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We Statement. This will be the focus of your brainstorm.

⌚ 5 minutes



Key rules of brainstorming

To run a smooth and productive session

- Stay in topic.
- Encourage wild ideas.
- Defer judgment.
- Listen to others.
- Go for volume.
- If possible, be visual.

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

⌚ 10 minutes

Dharani

Give students the motivation in choosing the service.
Helps the university.
Anyone can access.
Reduces bugs.
Increases Accuracy and Efficiency.

Indhumalini

Reduces the time consumption.
Provides 24/7 service.
Solves all the queries.
Reduces errors in choosing the courses.
Students can download documents & assignments anytime.

Pavithra

Makes easy in admission process.
High accuracy rate.
Easy accessibility of data.
Provides security and privacy.
Reduces manual works.
No more waiting out of paper application forms.

Priyadharshini

Provides better clarity.
Can access anywhere.
Fast, efficient, and reliable.
Change of occurrence of errors is less.
Students will be satisfied based on the system performance.
Opportunities for studying abroad.

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger, than six sticky notes, try and see if you can break it up into smaller sub-groups.

⌚ 20 minutes

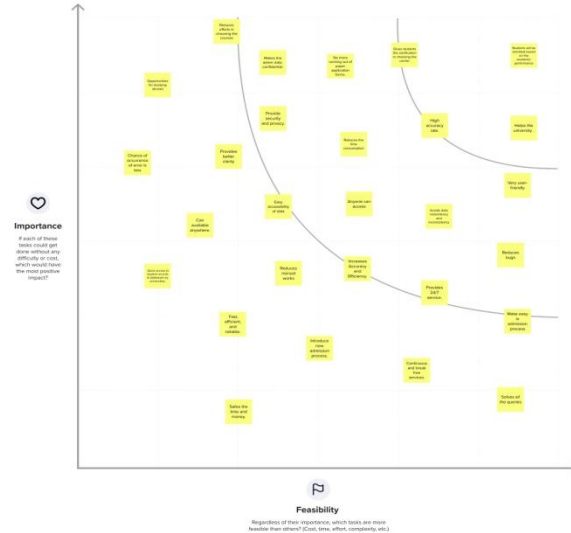


4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⌚ 20 minutes



PROBLEM STATEMENT:

- Today in college's student details are entered manually .
- First of all,he/she takes admission form from reception and fills it and submits it into office.
- Filled form is first checked with documents like merit list an details came from university and verified by an official person ,if there is any mistake then it is corrected.
- Require much man power and more time.
- Since, all the work is done in papers so it is very hard to locate a particular student record when it is required.

PROPOSED SOLUTION:

- Reduce the time taken process the applications of students, admitting a student, conducting the online examination, verify student marks, and send call letters to selected students.
- Centralized data handling.
- Paperless admission with reduced man power.

PROBLEM SOLUTION FIT:

The Problem-Solution Fit simply means that we have found a problem with our customer and that the solution we have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioral patterns and recognize what would work and why.

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) Who is your customer? CS The customers of this project are the students who completed their higher secondary and looking for good universities for higher education.	6. CUSTOMER CONSTRAINTS What constraints prevent your customers from taking action or limit their choices of solutions? ■ Cut-off, Marks and eligibility criteria.	5. AVAILABLE SOLUTIONS Which solutions are available to the customers when they face the problem ■ or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? Easy to choose the college. Advantages of this is provides clarity to the students. Disadvantage is if the mark details is wrong the prediction will be wrong.	Explore AS, differentiate
	2. JOBS-TO-BE-DONE / PROBLEMS Which jobs-to-be-done (or problems) do you address for your customers? It should helps to predict the universities for the students.	9. PROBLEM ROOT CAUSE RC What is the real reason that this problem exists? What is the back story behind the need to do this job? Root cause of problem is undeserved Candidate selected for the top universities previous years, now deserved candidate selected for universities based on eligibility criteria.	7. BEHAVIOUR BE What does your customer do to address the problem and get the job done ? The customer mainly gives some information's such as GRE score, cgpa , IELTS score based on which theuser ask to predict eligibility to the university that they intend to apply.	
Focus on J&P, lap into BE, understand RC				

CHAPTER 4

REQUIREMENT ANALYSIS

FUNCTIONAL REQUIREMENT:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Score sheets Curriculum vitae Letter of recommendation
FR-2	User Confirmation	Students should upload the records in the site. The candidate's list will be shortlisted based on the marks and details they uploaded.

NON-FUNCTIONAL REQUIREMENT:

Following are the non-functional requirements of the proposed solution.

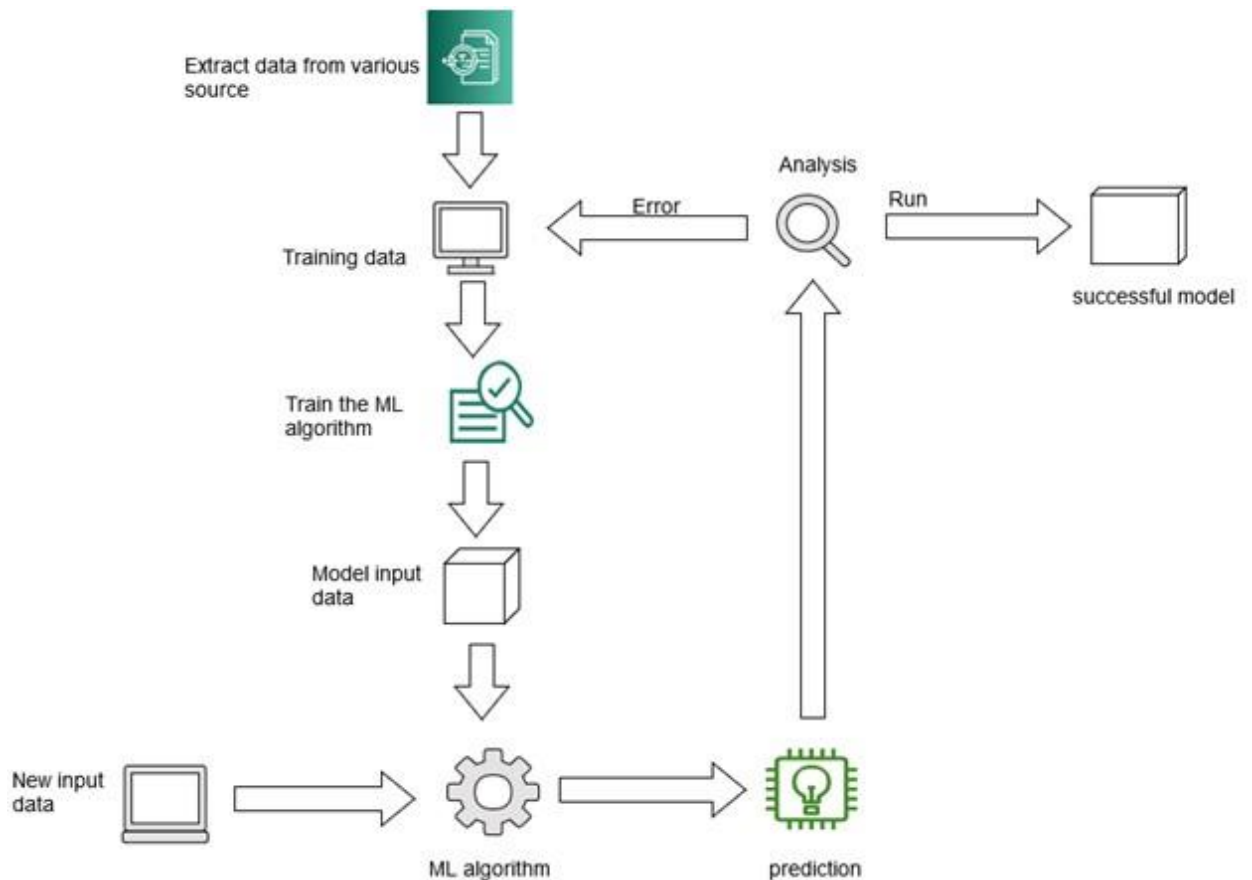
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	User friendly. Easy to access by anyone.
NFR-2	Security	Data enter by the candidate will be secured safely.
NFR-3	Reliability	The possibility of errors will be reduced.
NFR-4	Performance	Efficient . Handle the data efficiently.
NFR-5	Availability	Provides 24/7 service. Anyone from anywhere.
NFR-6	Scalability	Provides accurate result. Can manage many users at same time.

CHAPTER 5

PROJECT DESIGN

DATA FLOW DIAGRAM:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

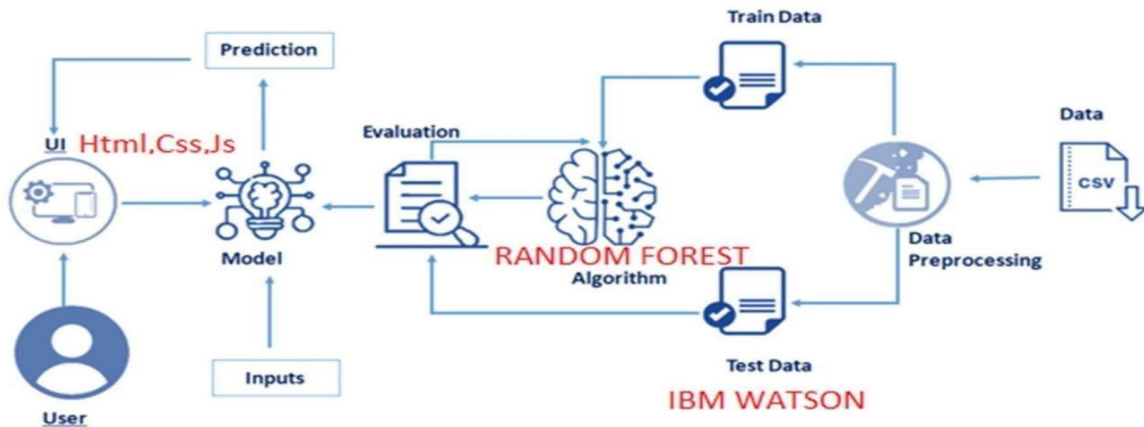


SOLUTION & TECHNICAL ARCHITECTURE:

Solution architecture is a complex process – with many sub process that bridges the gap between business problems and technology solutions. Its goals are to:

- Students are often worried about their chances of admission to University.

- The aim of this project is to help students in shortlisting universities with their profiles.
- The predicted output gives them a fair idea about their admission chances in a particular university.
- This analysis should also help students who are currently preparing or will be preparing to get a better idea.



USER STORIES:

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson
4.	Application Logic-3	Logic for a process in the application	Random forest

Table-2: Application Characteristics:

S.No	Characteristics	Technology
1.	Open-Source Frameworks	Flask
2.	Performance	It can handle many requests per second.

CHAPTER 6

PROJECT PLANNING & SCHEDULING

MILESTONE AND ACTIVITY:

PLANNING	Planning all the modules and features which are going to implement
REQUIREMENTS	We decided what are the software's and tools we need and install the required resources
DESIGN	We design all the modules like login page, dashboard, Academic details form etc.,
DEVELOPMENT	We are going to develop the predictor which uses the previous dataset and academic details of the student. In this phase we use some algorithm for prediction
TESTING	We are going to test the model if we face any error we debug the error
DEPLOYMENT	Finally we submit the project in GitHub

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	10	High	All
Sprint-1	Gmail notification	USN-2	As a user, I will receive confirmation email once I have registered for the application	5	Low	All
Sprint-2	Login	USN-3	As a user, I can login with my credential and get a personalized dashboard	5	Low	All
Sprint-2	View institutes	USN-4	As a user, I can view list of institutes	10	Low	All
Sprint-3	prediction	USN-5	As a user, I can provide my scores for prediction	10	High	All
Sprint-4	preferences	USN-6	As a user I can select and filter results based on my preferences	20	High	All

SPRINT DELIVERY SCHEDULE:

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date(Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date(Actual)
Sprint-1	15	6 Days	24 Oct 2022	29 Oct 2022	15	29 Oct 2022
Sprint-2	15	6 Days	31 Oct 2022	05 Nov 2022	15	05 Nov 2022
Sprint-3	10	6 Days	07 Nov 2022	12 Nov 2022	10	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

CHAPTER 7

CODING & SOLUTIONING

SOURCE CODE:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta name="viewport" content="width=device-width, initial-scale=1, maximum-scale=1, user-
scalable=no">
  <link rel="stylesheet" type="text/css" rel="noopener" target="_blank" href="../static/css/styles.css">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css" rel="stylesheet"
integrity="sha384-Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
  <script type="text/javascript" src="../static/js/script.js" async></script>
  <title>University Admit Eligibility Predictor</title>
</head>
<body>
  <nav class="navbar navbar-expand-lg bg-light">
    <div class="container-fluid">
      <a class="navbar-brand text-responsive-h" href="/">
        
        University Admit Eligibility Prediction System
      </a>
    </div>
  </nav>

  <div class="p-4">
    <div class="row mb-3">
      <div class="col-4">
        <h2 class="text-responsive-h">
```

Enter your details and get probability of your admission

</h2>

<p class="text-responsive">

Students are often worried about their chances of getting admissions in universities. The main objective of this project is to help the students in shortlisting universities with their profiles. The predicted output gives them a fair idea about their admission chances in a particular university. This analysis should also help students who are currently preparing or will be preparing to get a better idea.

</p>

<div class="d-flex justify-content-right">

</div>

</div>

<div class="col-8">

<div class="card p-2 ms-2 my-2">

<div class="card-body">

<h5 class="card-title pb-4">

Enter the details

</h5>

<form action="/" method="post" id="theForm">

<div class="row mb-3">

<label for="gre" class="col-lg-2 col-form-label">GRE Score:</label>

<div class="col-lg-10">

<input type="number" class="form-control" id="gre" name="gre" min="250"

max="340" required>

</div>

</div>

<div class="row mb-3">

<label for="tofel" class="col-lg-2 col-form-label">TOFEL Score:</label>

<div class="col-lg-10">

<input type="number" class="form-control" id="tofel" name="tofel" min="50"

max="120" required>

</div>

</div>

```

        <div class="row mb-3">
            <label for="university_rating" class="col-lg-2 col-form-label">University
Rating:</label>
            <div class="col-lg-10">
                <input type="number" class="form-control" id="university_rating" step="0.01"
name="university_rating" min="1" max="5" required>
            </div>
        </div>
        <div class="row mb-3">
            <label for="sop" class="col-lg-2 col-form-label">SOP:</label>
            <div class="col-lg-10">
                <input type="number" class="form-control" id="sop" name="sop" step="0.01" min="1" max="5"
required>
            </div>
        </div>
        <div class="row mb-3">
            <label for="lor" class="col-lg-2 col-form-label">LOR:</label>
            <div class="col-lg-10">
                <input type="number" class="form-control" id="lor" name="lor" step="0.01"
min="1" max="5" required>
            </div>
        </div>
        <div class="row mb-3">
            <label for="cgpa" class="col-lg-2 col-form-label">CGPA:</label>
            <div class="col-lg-10">
                <input type="number" class="form-control" id="cgpa" name="cgpa" step="0.01"
min="5" max="10" required>
            </div>
        </div>
        <fieldset class="row mb-3">
            <legend class="col-form-label col-sm-2 pt-0">Research:</legend>
            <div class="col-sm-10">
                <div class="form-check">
                    <input class="form-check-input" type="radio" name="yes_no_radio"

```

```

id="gridRadios1" value="1">
    <label class="form-check-label" for="yes_no_radio">
        Yes
    </label>
</div>
<div class="form-check">
    <input class="form-check-input" type="radio" name="yes_no_radio"
id="gridRadios2" value="0" checked>
    <label class="form-check-label" for="yes_no_radio">
        No
    </label>
</div>
</div>
</fieldset>
<div class="row lg-3">
    <div class="col-lg-2 mb-2 me-3">
        <button type="submit" class="btn btn-primary" id="button">Predict</button>

</div>

<div class="col-lg-2" id="spinner">
    <div class="spinner-border text-primary m-1" role="status">
        <span class="visually-hidden">Loading...</span>
    </div>
    <div class="spinner-grow text-primary m-1" role="status">
        <span class="visually-hidden">Loading...</span>
    </div>
</div>
</form>
</div>
</div>
</div>
</div>
</div>

```

```

<h1> Index Page </h1>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>

```

OUTPUT:

CHANCE:

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta name="viewport" content="width=device-width, initial-scale=1, maximum-scale=1, user-
scalable=no">

```

```

<link rel="stylesheet" type="text/css" rel="noopener" target="_blank" href="../static/css/styles.css">
<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
<script type="text/javascript" src="../static/js/script.js" async></script>
<title>University Admit Eligibility Predictor</title>
</head>
<body>
<nav class="navbar navbar-expand-lg bg-light">
<div class="container-fluid">
<a class="navbar-brand text-responsive-h" href="/">

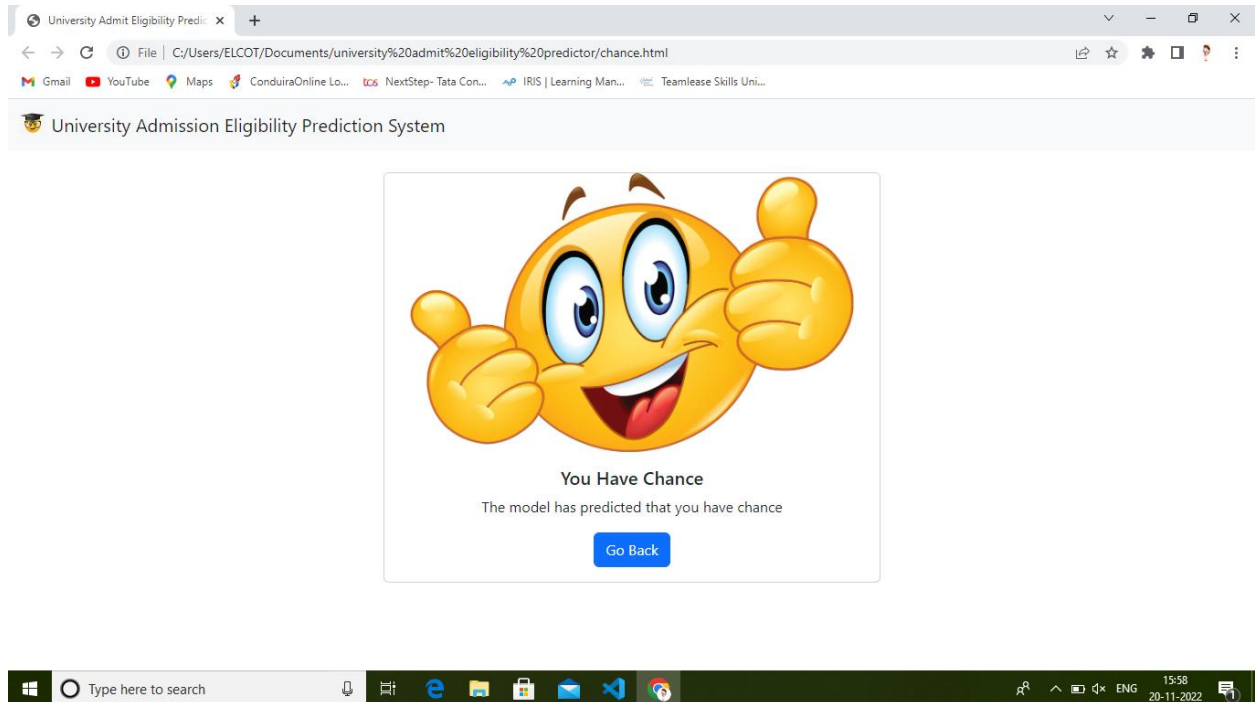
University Admission Eligibility Prediction System
</a>
</div>
</nav>
<div class="container text-center p-4">
<div class="d-flex justify-content-center">

<div class="card" style="width: 34rem;">

<div class="card-body">
<h5 class="card-title">You Have Chance</h5>
<p class="card-text">The model has predicted that you have chance</p>
<a href="/home" class="btn btn-primary">Go Back</a>
</div>
</div>
</div>
</div>
</body>
</html>

```

OUTPUT:



NO CHANCE:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta name="viewport" content="width=device-width, initial-scale=1, maximum-scale=1, user-scalable=no">
  <link rel="stylesheet" type="text/css" rel="noopener" target="_blank" href="../static/css/styles.css">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css" rel="stylesheet"
  integrity="sha384-Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi"
  crossorigin="anonymous">
  <script type="text/javascript" src="../static/js/script.js" async></script>
  <title>University Admit Eligibility Predictor</title>
</head>
<body>
```

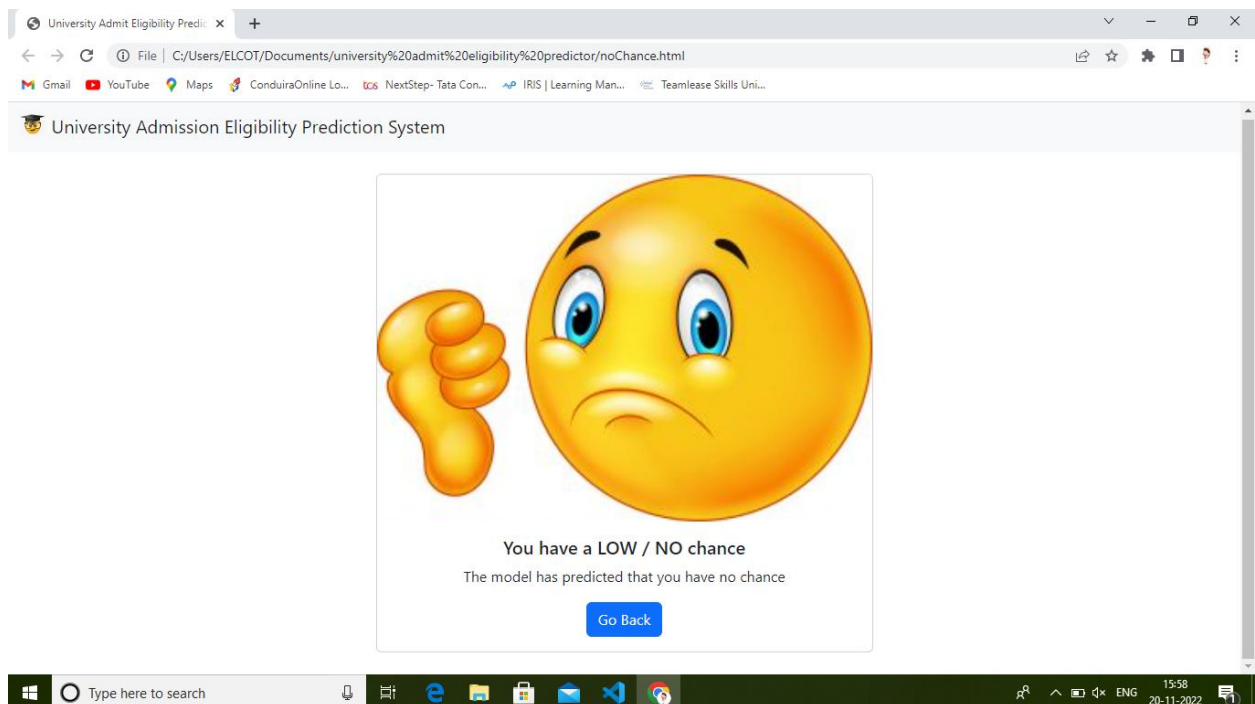


```

<nav class="navbar navbar-expand-lg bg-light">
  <div class="container-fluid">
    <a class="navbar-brand text-responsive-h" href="/">
      
      University Admission Eligibility Prediction System
    </a>
  </div>
</nav>
<div class="container text-center p-4">
  <div class="d-flex justify-content-center">
    <div class="card" style="width: 34rem;">
      
      <div class="card-body">
        <h5 class="card-title">You have a LOW / NO chance</h5>
        <p class="card-text">The model has predicted that you have no chance</p>
        <a href="/home" class="btn btn-primary">Go Back</a>
      </div>
    </div>
  </div>
</div>
</div>
</body>
</html>

```

OUTPUT:



CHAPTER 8

TESTING

TEST CASES:

1. Verify if user is able to see landing page
2. Verify if the menu bar is works on clicking
3. Verify user is able to navigate to admissions page
4. Verify user is able to see the testimonials
5. Verify the page elements are clear
6. Verify if the social media profiles of the university are accessible
7. Verify if the campus tour video is clear
8. Verify if proud alumni feature of the university are accessible
9. Verify if the chance of admission prediction page receives input correctly
10. Verify if the chance of admission prediction page gives accurate output
11. Verify if the course details table is clearly visible
12. Verify if the guide files are downloaded
13. Verify if the scholarship resources are accessible
14. Verify if the page is responsive
15. Verify if the page is suitable for all devices

USER ACCEPTANCE TESTING:

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	4	2	2	18
Duplicate	0	0	0	0	0
External	2	3	0	2	7
Fixed	10	6	9	20	36
Not Reproduced	0	0	0	0	0
Skipped	0	0	2	1	3
Won't Fix	0	0	0	0	0
Totals	22	13	13	25	73

Test Case Analysis:

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

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	7	0	0	7
Client Application	10	0	0	10
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	5	0	0	5
Final Report Output	4	0	0	4
Version Control	2	0	0	2

CHAPTER 9

RESULTS

PERFORMANCE METRICS:

1. Hours worked : 50 hours
2. Sticking to Timelines : 100%
3. Consistency of the product : 70%
4. Efficiency of the product : 85%
5. Quality of the product : 85%

CHAPTER 10

ADVANTAGES & DISADVANTAGES

ADVANTAGES:

- It helps student for making decision for choosing a right college.
- It is fast, efficient and reliable.
- Avoids data redundancy and inconsistency
- Very user-friendly.
- Easy accessibility of data.
- Here the chance of occurrence of error is less when compared with the existing system.

DISADVANTAGES:

- The predictions made are not 100% accurate but accurate to an acceptable value.
- Required active internet connection.
System will provide in accurate results if data entered incorrectly.

CHAPTER11

CONCLUSION

The project uses a Linear regressor to predict the output and a web application is built to make the UI more accessible and easy using various technologies such as python, React JS, HTML5, CSS, Flask, Scikit, Matplot, Numpy, Pandas, Seaborn and other libraries. After the deployment of the web application, it can be accessed from anywhere with internet connection. While it may sound simple to fill out a few forms and process the information, much more is involved in the selection of applicants than this. This project reduces the long hours of analysis to predict the eligibility of the admission to a rated university. The majority of features that are included work flawlessly and the errors that do exist are minor or graphical. Overall, the system performs well, and while it does not include all of the features that may have been desired, it lives up to initial expectations. This system helps the student to get clear idea about getting admission in the universities based on their academic performance.

CHAPTER 12

FUTURE SCOPE

The future scope of this project is very broad. 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 need not travel a long distance for the admission and his/her time is also saved as a result of this automated system.
- Develop a community consisting of faculty, alumni and aspirants to get to know about the university more.

APPENDIX

SOURCE CODE:

Landing Page:

App.py:

```
from flask import Flask, render_template, redirect, url_for, request
import requests
```

```
app = Flask(__name__)
```

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

```
def index():
```

```
if request.method == 'POST':
```

```
arr = []
```

```
for i in request.form:
```

```
val = request.form[i]
```

```
if val == "":
```

```
return redirect(url_for("demo2"))
```

```
arr.append(float(val))
```

```
# deepcode ignore HardcodedNonCryptoSecret: <please specify a reason of ignoring this>
```

```
API_KEY = "p-03a6131d4957c0415bcf495eba18c26430a70d9c"
```

```
token_response = requests.post('https://iam.cloud.ibm.com/identity/token', data={
```

```
"apikey": API_KEY,
```

```
"grant_type": 'urn:ibm:params:oauth:grant-type:apikey'
```

 $\})$

```
mltoken = token_response.json()["access_token"]
```

```
header = {'Content-Type': 'application/json', 'Authorization': 'Bearer ' + mltoken}
```

```
payload_scoring = {
```

```
"input_data": [{"fields": [ 'GRE Score',
```

'TOEFL Score',

'University Rating',


```

        'SOP',
        'LOR ',
        'CGPA',
        'Research'],

    "values": [arr

        ]]

    }

    response_scoring = requests.post(
        'https://us-south.ml.cloud.ibm.com/ml/v4/deployments/8308fd4c-24a5-46ab-96fa-
263657ae4ad0/predictions?version=2022-10-18',
        json=payload_scoring,
        headers=header
    ).json()

    result = response_scoring['predictions'][0]['values']

    if result[0][0] > 0.5:
        return redirect(url_for('chance', percent=result[0][0]*100))
    else:
        return redirect(url_for('no_chance', percent=result[0][0]*100))
    else:
        return redirect(url_for("demo2"))

@app.route("/home")
def demo2():
    return render_template("demo2.html")

@app.route("/chance/<percent>")
def chance(percent):
    return render_template("chance.html", content=[percent])

@app.route("/nochance/<percent>")

```

```

def no_chance(percent):
    return render_template("noChance.html", content=[percent])

@app.route('/<path:path>')
def catch_all():
    return redirect(url_for("demo2"))

if __name__ == "__main__":
    app.run()

```

Python Code:

```

import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
%matplotlib inline

```

LOAD THE DATASET

In [3]:

```

import os, types
import pandas as pd
from botocore.client import Config
import ibm_boto3

def __iter__(self): return 0

# @hidden_cell
# The following code accesses a file in your IBM Cloud Object Storage. It
# includes your credentials.
# You might want to remove those credentials before you share the notebook.
cos_client = ibm_boto3.client(service_name='s3',
                              ibm_api_key_id='T6FhPnWEPrnR91XKAfpiopbqTZ8j-gbLtjakMGexd6v0',
                              ibm_auth_endpoint="https://iam.cloud.ibm.com/oidc/token",
                              config=Config(signature_version='oauth'),
                              endpoint_url='https://s3.private.us.cloud-object-
storage.appdomain.cloud')

bucket = 'university-donotdelete-pr-1ijujvyruwxy5c'
object_key = 'Admission_Predict.csv'

```

```
body = cos_client.get_object(Bucket=bucket,Key=object_key)['Body']
# add missing __iter__ method, so pandas accepts body as file-like object
if not hasattr(body, "__iter__"): body.__iter__ = types.MethodType( __iter__,
body )
```

```
data = pd.read_csv(body)
data.head()
```

Out[3]:

	Serial No.	GRE Score	TOEFL Score	University Rating	SOP	LOR	CGPA	Research	Chance of Admit
0	1	337	118	4	4.5	4.5	9.65	1	0.92
1	2	324	107	4	4.0	4.5	8.87	1	0.76
2	3	316	104	3	3.0	3.5	8.00	1	0.72
3	4	322	110	3	3.5	2.5	8.67	1	0.80
4	5	314	103	2	2.0	3.0	8.21	0	0.65

In [4]:

```
data.drop(["Serial No."], axis=1, inplace=True)
data.describe()
```

Out[4]:

	GRE Score	TOEFL Score	Universit y Rating	SOP	LOR	CGPA	Research	Chance of Admit
count	400.0000 00	400.0000 00	400.0000 00	400.0000 00	400.0000 00	400.0000 00	400.0000 00	400.0000 00
mean	316.8075 00	107.4100 00	3.087500	3.400000	3.452500	8.598925	0.547500	0.724350
std	11.47364 6	6.069514	1.143728	1.006869	0.898478	0.596317	0.498362	0.142609

	GRE Score	TOEFL Score	Universit y Rating	SOP	LOR	CGPA	Research	Chance of Admit
min	290.0000 00	92.00000 0	1.000000	1.000000	1.000000	6.800000	0.000000	0.340000
25%	308.0000 00	103.0000 00	2.000000	2.500000	3.000000	8.170000	0.000000	0.640000
50%	317.0000 00	107.0000 00	3.000000	3.500000	3.500000	8.610000	1.000000	0.730000
75%	325.0000 00	112.0000 00	4.000000	4.000000	4.000000	9.062500	1.000000	0.830000
max	340.0000 00	120.0000 00	5.000000	5.000000	5.000000	9.920000	1.000000	0.970000

In [5]:

```
data.info()
RangeIndex: 400 entries, 0 to 399
Data columns (total 8 columns):
#   Column                Non-Null Count  Dtype
---  -
0   GRE Score              400 non-null   int64
1   TOEFL Score            400 non-null   int64
2   University Rating      400 non-null   int64
3   SOP                    400 non-null   float64
4   LOR                    400 non-null   float64
5   CGPA                   400 non-null   float64
6   Research                400 non-null   int64
7   Chance of Admit        400 non-null   float64
dtypes: float64(4), int64(4)
memory usage: 25.1 KB
```

In [6]:

```
data.isnull().sum()
```

Out[6]:

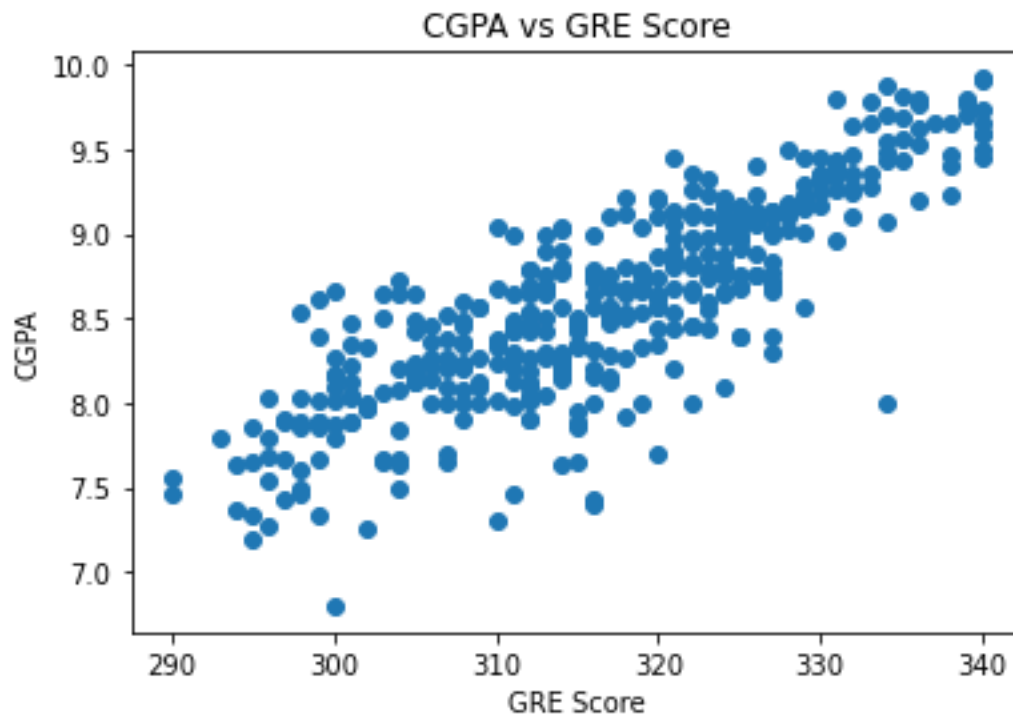
```
GRE Score      0
TOEFL Score    0
University Rating  0
```

```
SOP                0
LOR                0
CGPA               0
Research           0
Chance of Admit    0
dtype: int64
```

VISUALIZATION

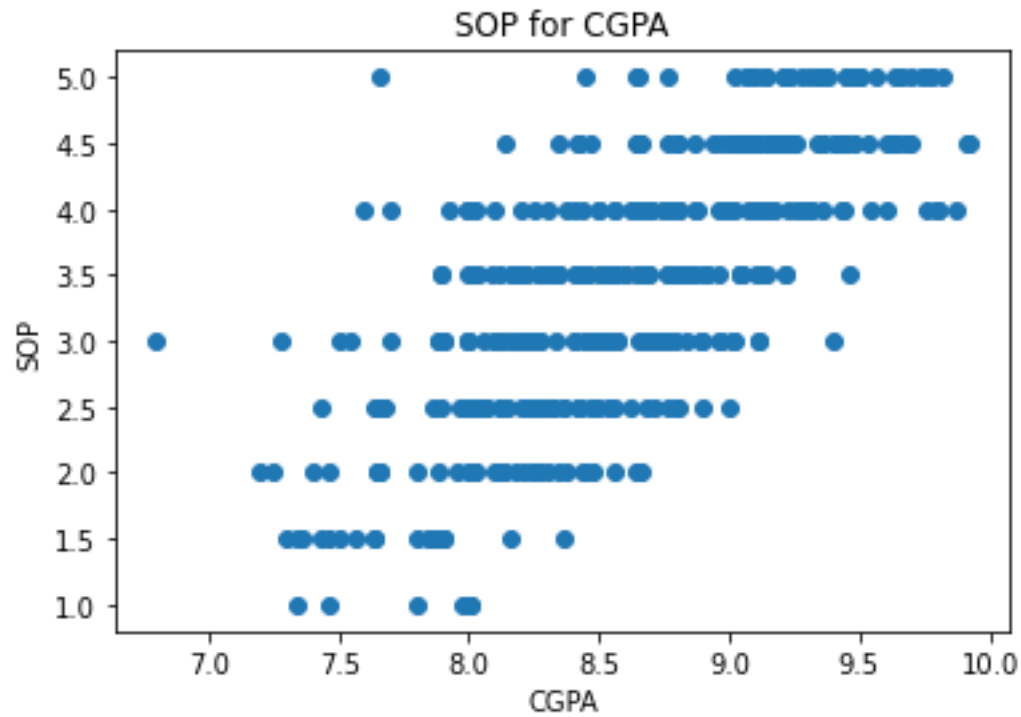
In [7]:

```
plt.scatter(data['GRE Score'],data['CGPA'])
plt.title('CGPA vs GRE Score')
plt.xlabel('GRE Score')
plt.ylabel('CGPA')
plt.show()
```



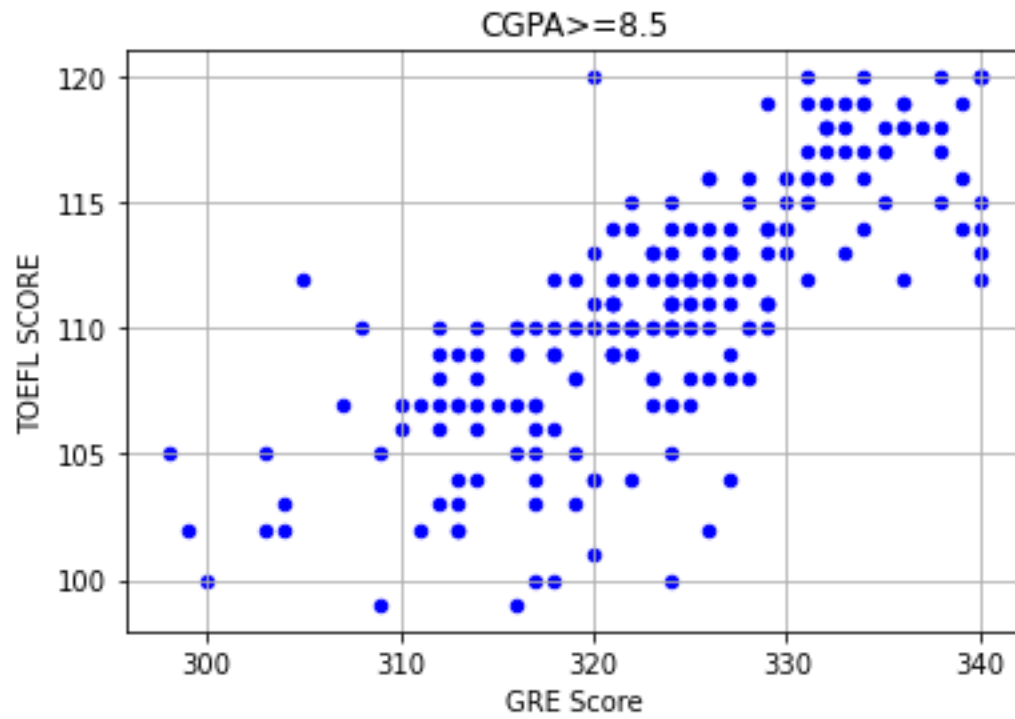
In [8]:

```
plt.scatter(data['CGPA'],data['SOP'])
plt.title('SOP for CGPA')
plt.xlabel('CGPA')
plt.ylabel('SOP')
plt.show()
```



In [9]:

```
data[data.CGPA >= 8.5].plot(kind='scatter', x='GRE Score', y='TOEFL  
Score',color="BLUE")  
  
plt.xlabel("GRE Score")  
plt.ylabel("TOEFL SCORE")  
plt.title("CGPA>=8.5")  
plt.grid(True)  
  
plt.show()
```



In [10]:

```
data["GRE Score"].plot(kind = 'hist',bins = 200,figsize = (6,6))

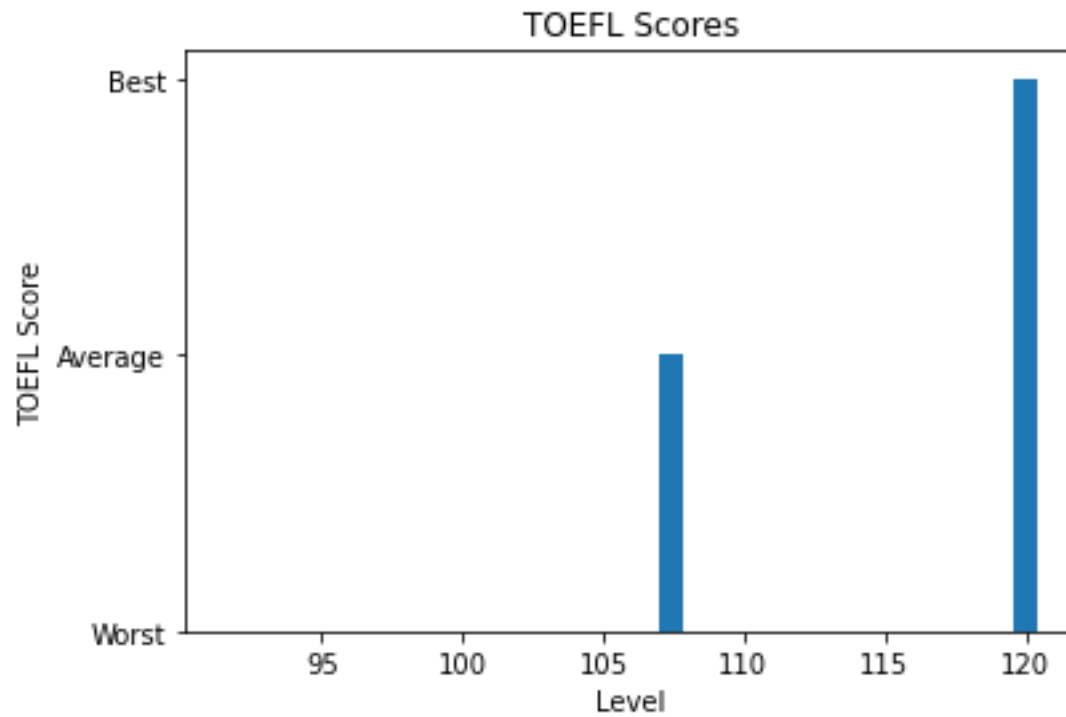
plt.title("GRE Scores")
plt.xlabel("GRE Score")
plt.ylabel("Frequency")

plt.show()
```



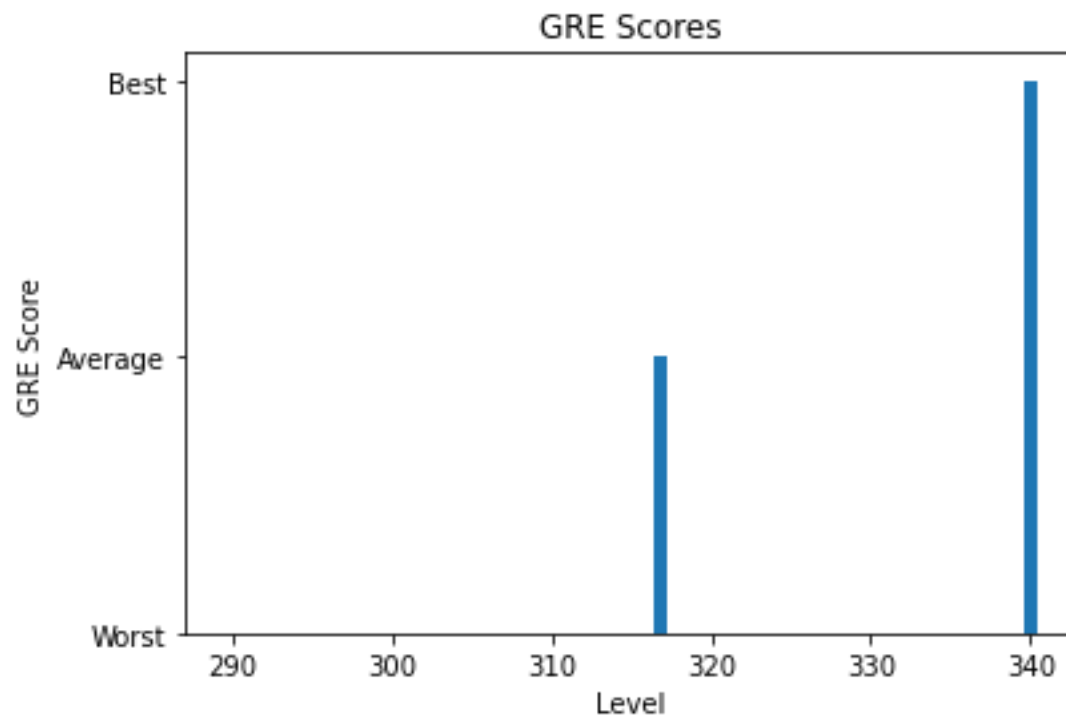
In [11]:

```
p = np.array([data["TOEFL Score"].min(),data["TOEFL  
Score"].mean(),data["TOEFL Score"].max()])  
r = ["Worst","Average","Best"]  
plt.bar(p,r)  
  
plt.title("TOEFL Scores")  
plt.xlabel("Level")  
plt.ylabel("TOEFL Score")  
  
plt.show()
```

In [12]:

```
g = np.array([data["GRE Score"].min(),data["GRE Score"].mean(),data["GRE  
Score"].max()])  
h = ["Worst","Average","Best"]  
plt.bar(g,h)  
  
plt.title("GRE Scores")  
plt.xlabel("Level")  
plt.ylabel("GRE Score")  
  
plt.show()
```

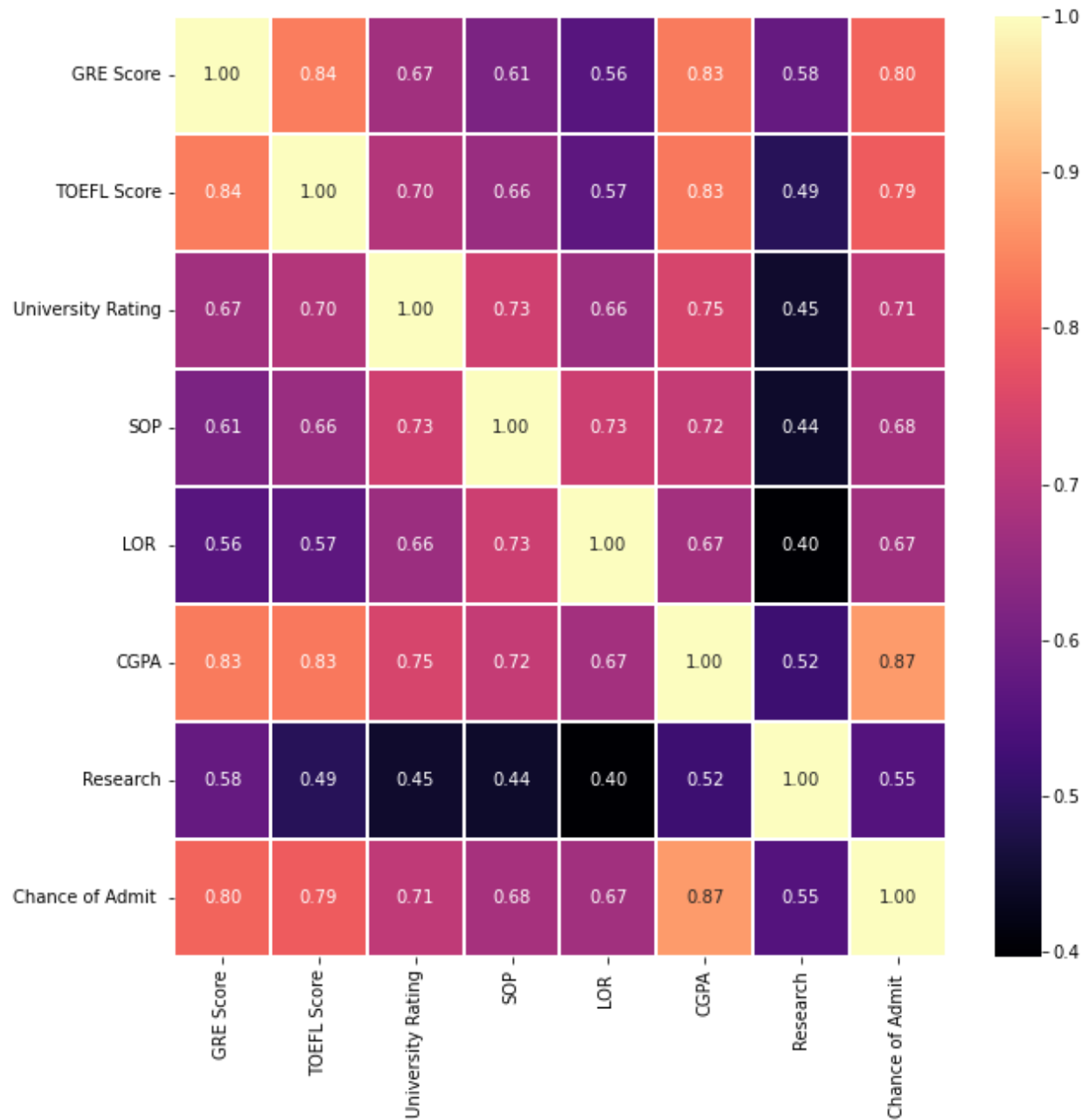


In [13]:

```
plt.figure(figsize=(10, 10))

sns.heatmap(data.corr(), annot=True, linewidths=0.05, fmt=
'.2f', cmap="magma")

plt.show()
```

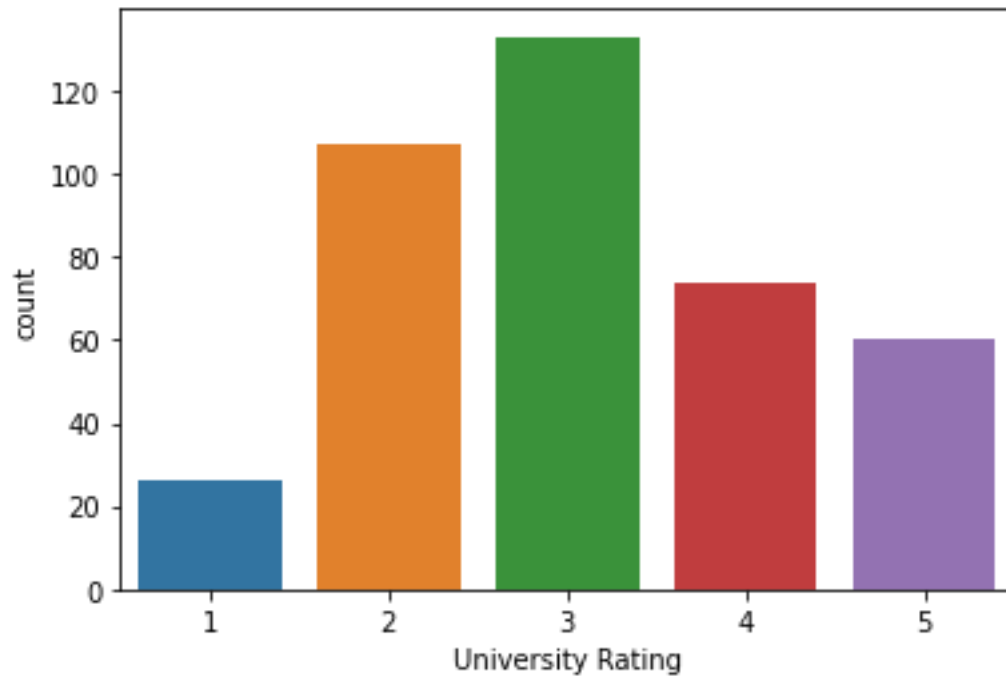


In [14]:

```
data.Research.value_counts()

sns.countplot(x="University Rating",data=data)
```

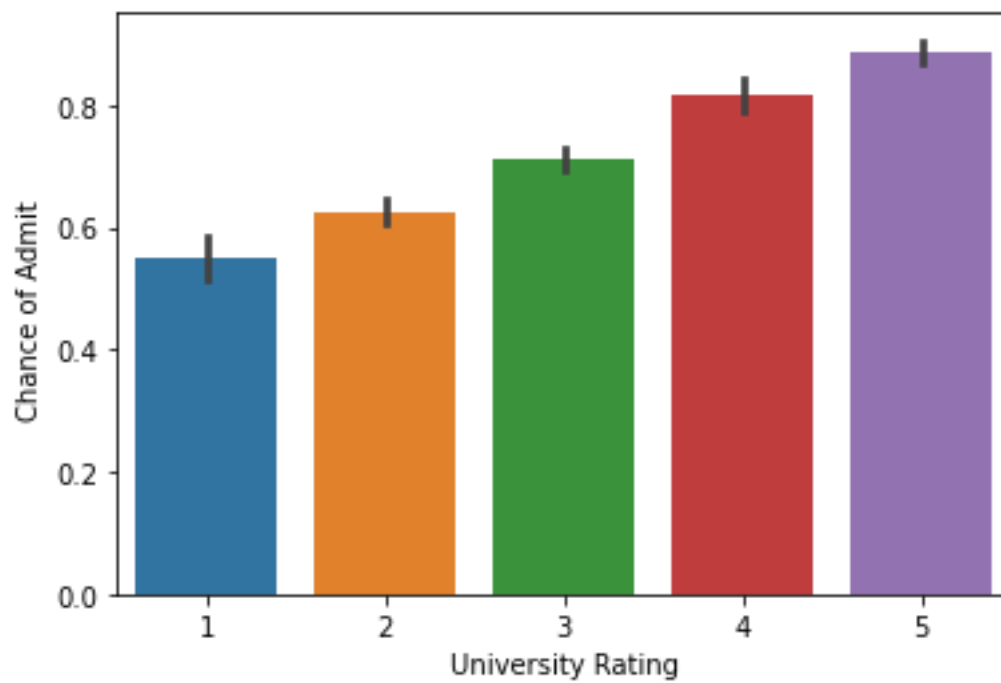
Out[14]:



In [15]:

```
sns.barplot(x="University Rating", y="Chance of Admit ", data=data)
```

Out[15]:



TRAINING AND TESTING SPLIT

In [16]:

```
X=data.drop(['Chance of Admit '],axis=1) #input data_set
y=data['Chance of Admit '] #output labels
```

In [17]:

```
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.15)
```

MODELING AND TRAINING

In [18]:

```
from sklearn.ensemble import GradientBoostingRegressor
rgr = GradientBoostingRegressor()
rgr.fit(X_train,y_train)
```

Out[18]:

```
GradientBoostingRegressor()
```

In [19]:

```
rgr.score(X_test,y_test)
```

Out[19]:

```
0.8182951077367754
```

In [20]:

```
y_predict=rgr.predict(X_test)
```

In [21]:

```
from sklearn.metrics import mean_squared_error, r2_score,mean_absolute_error
import numpy as np
print('Mean Absolute Error:', mean_absolute_error(y_test, y_predict))
print('Mean Squared Error:', mean_squared_error(y_test, y_predict))
print('Root Mean Squared Error:', np.sqrt(mean_squared_error(y_test,
y_predict)))
```

```
Mean Absolute Error: 0.04655745821447952
```

```
Mean Squared Error: 0.003985893658760451
```

```
Root Mean Squared Error: 0.06313393428862525
```

In [22]:

```
y_train = (y_train>0.5)
```

```
y_test = (y_test>0.5)
```

In [23]:

```
from sklearn.linear_model._logistic import LogisticRegression
```

```
lore = LogisticRegression(random_state=0, max_iter=1000)
```

```
lr = lore.fit(X_train, y_train)
```

In [24]:

```
y_pred = lr.predict(X_test)
```

In [25]:

```
from sklearn.metrics import accuracy_score, recall_score, roc_auc_score,
confusion_matrix
```

```
print('Accuracy Score:', accuracy_score(y_test, y_pred))
print('Recall Score:', recall_score(y_test, y_pred))
print('ROC AUC Score:', roc_auc_score(y_test, y_pred))
print('Confussion Matrix:\n', confusion_matrix(y_test, y_pred))
```

```
Accuracy Score: 0.9666666666666667
```

```
Recall Score: 0.9811320754716981
```

```
ROC AUC Score: 0.9191374663072777
```

```
Confussion Matrix:
```

```
[[ 6  1]
```

```
 [ 1 52]]
```

SAVING THE MODEL

In [26]:

```
import pickle
```

In [27]:

```
pickle.dump(lr, open("university.pkl", "wb")) #logistic regression model
```

HOSTING THE MODEL

In [28]:

```
import pickle
```

In [29]:

```
lr = pickle.load(open("university.pkl", "rb")) #logistic regression model
```

In [30]:

```
pip install -U ibm-watson-machine-learning
```

```
Requirement already satisfied: ibm-watson-machine-learning in
```

```
/opt/conda/envs/Python-3.9/lib/python3.9/site-packages (1.0.257)
```

```
Requirement already satisfied: packaging in /opt/conda/envs/Python-
```

```
3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (21.3)
```

```
Requirement already satisfied: lomond in /opt/conda/envs/Python-
```

```
3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (0.3.3)
```

```
Requirement already satisfied: pandas<1.5.0,>=0.24.2 in
```

```
/opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-
machine-learning) (1.3.4)
```

Requirement already satisfied: requests in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (2.26.0)

Requirement already satisfied: urllib3 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (1.26.7)

Requirement already satisfied: ibm-cos-sdk==2.11.* in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (2.11.0)

Requirement already satisfied: importlib-metadata in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (4.8.2)

Requirement already satisfied: certifi in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (2022.9.24)

Requirement already satisfied: tabulate in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-watson-machine-learning) (0.8.9)

Requirement already satisfied: jmespath<1.0.0,>=0.7.1 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk==2.11.*->ibm-watson-machine-learning) (0.10.0)

Requirement already satisfied: ibm-cos-sdk-s3transfer==2.11.0 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk==2.11.*->ibm-watson-machine-learning) (2.11.0)

Requirement already satisfied: ibm-cos-sdk-core==2.11.0 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk==2.11.*->ibm-watson-machine-learning) (2.11.0)

Requirement already satisfied: python-dateutil<3.0.0,>=2.1 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from ibm-cos-sdk-core==2.11.0->ibm-cos-sdk==2.11.*->ibm-watson-machine-learning) (2.8.2)

Requirement already satisfied: pytz>=2017.3 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from pandas<1.5.0,>=0.24.2->ibm-watson-machine-learning) (2021.3)

Requirement already satisfied: numpy>=1.17.3 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from pandas<1.5.0,>=0.24.2->ibm-watson-machine-learning) (1.20.3)

Requirement already satisfied: six>=1.5 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from python-dateutil<3.0.0,>=2.1->ibm-cos-sdk-core==2.11.0->ibm-cos-sdk==2.11.*->ibm-watson-machine-learning) (1.15.0)

Requirement already satisfied: charset-normalizer~=2.0.0 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from requests->ibm-watson-machine-learning) (2.0.4)

Requirement already satisfied: idna<4,>=2.5 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from requests->ibm-watson-machine-learning) (3.3)

Requirement already satisfied: zipp>=0.5 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from importlib-metadata->ibm-watson-machine-learning) (3.6.0)

Requirement already satisfied: pyparsing!=3.0.5,>=2.0.2 in /opt/conda/envs/Python-3.9/lib/python3.9/site-packages (from packaging->ibm-watson-machine-learning) (3.0.4)

Note: you may need to restart the kernel to use updated packages.

In [31]:

```
from ibm_watson_machine_learning import APIClient
import json
```

In [32]:

```
uml_credentials = {
    "url": "https://us-south.ml.cloud.ibm.com",
    "apikey": "poJ22ua6BCG9qY33B8fkgnz1bnP1f9DZqUlF9NkBM1bZ"
}
```

```
client = APIClient(uml_credentials)
```

In [33]:

```
def guid_from_space_name(client, space_name):
    space = client.spaces.get_details()
    idr = []
    for i in space['resources']:
        idr.append(i['metadata']['id'])
    return idr
```

In [34]:

```
space_uid = guid_from_space_name(client, "university")
print(space_uid[0])
```

```
4f0253e5-f162-4eec-84ba-72e01fb69ab9
```

In [35]:

```
client.set.default_space(space_uid[0])
```

Out[35]:

```
'SUCCESS'
```

In [36]:

```
client.software_specifications.list()
```

NAME	ASSET_ID	TYPE
default_py3.6	0062b8c9-8b7d-44a0-a9b9-46c416adcbd9	base
kernel-spark3.2-scala2.12	020d69ce-7ac1-5e68-ac1a-31189867356a	base
pytorch-onnx_1.3-py3.7-edt	069ea134-3346-5748-b513-49120e15d288	base

scikit-learn_0.20-py3.6	09c5a1d0-9c1e-4473-a344-eb7b665ff687	base
spark-mllib_3.0-scala_2.12	09f4cff0-90a7-5899-b9ed-1ef348aebdee	base
pytorch-onnx_rt22.1-py3.9	0b848dd4-e681-5599-be41-b5f6fccc6471	base
ai-function_0.1-py3.6	0cdb0f1e-5376-4f4d-92dd-da3b69aa9bda	base
shiny-r3.6	0e6e79df-875e-4f24-8ae9-62dcc2148306	base
tensorflow_2.4-py3.7-horovod	1092590a-307d-563d-9b62-4eb7d64b3f22	base
pytorch_1.1-py3.6	10ac12d6-6b30-4ccd-8392-3e922c096a92	base
tensorflow_1.15-py3.6-ddl	111e41b3-de2d-5422-a4d6-bf776828c4b7	base
autoai-kb_rt22.2-py3.10	125b6d9a-5b1f-5e8d-972a-b251688ccf40	base
runtime-22.1-py3.9	12b83a17-24d8-5082-900f-0ab31fbfd3cb	base
scikit-learn_0.22-py3.6	154010fa-5b3b-4ac1-82af-4d5ee5abbc85	base
default_r3.6	1b70aec3-ab34-4b87-8aa0-a4a3c8296a36	base
pytorch-onnx_1.3-py3.6	1bc6029a-cc97-56da-b8e0-39c3880dbbe7	base
kernel-spark3.3-r3.6	1c9e5454-f216-59dd-a20e-474a5cdf5988	base
pytorch-onnx_rt22.1-py3.9-edt	1d362186-7ad5-5b59-8b6c-9d0880bde37f	base
tensorflow_2.1-py3.6	1eb25b84-d6ed-5dde-b6a5-3fbdf1665666	base
spark-mllib_3.2	20047f72-0a98-58c7-9ff5-a77b012eb8f5	base
tensorflow_2.4-py3.8-horovod	217c16f6-178f-56bf-824a-b19f20564c49	base
runtime-22.1-py3.9-cuda	26215f05-08c3-5a41-a1b0-da66306ce658	base
do_py3.8	295addb5-9ef9-547e-9bf4-92ae3563e720	base
autoai-ts_3.8-py3.8	2aa0c932-798f-5ae9-abd6-15e0c2402fb5	base
tensorflow_1.15-py3.6	2b73a275-7cbf-420b-a912-eae7f436e0bc	base
kernel-spark3.3-py3.9	2b7961e2-e3b1-5a8c-a491-482c8368839a	base
pytorch_1.2-py3.6	2c8ef57d-2687-4b7d-acce-01f94976dac1	base
spark-mllib_2.3	2e51f700-bca0-4b0d-88dc-5c6791338875	base
pytorch-onnx_1.1-py3.6-edt	32983cea-3f32-4400-8965-dde874a8d67e	base
spark-mllib_3.0-py37	36507ebe-8770-55ba-ab2a-eafe787600e9	base
spark-mllib_2.4	390d21f8-e58b-4fac-9c55-d7ceda621326	base
autoai-ts_rt22.2-py3.10	396b2e83-0953-5b86-9a55-7ce1628a406f	base
xgboost_0.82-py3.6	39e31acd-5f30-41dc-ae44-60233c80306e	base
pytorch-onnx_1.2-py3.6-edt	40589d0e-7019-4e28-8daa-fb03b6f4fe12	base
pytorch-onnx_rt22.2-py3.10	40e73f55-783a-5535-b3fa-0c8b94291431	base
default_r36py38	41c247d3-45f8-5a71-b065-8580229facf0	base
autoai-ts_rt22.1-py3.9	4269d26e-07ba-5d40-8f66-2d495b0c71f7	base
autoai-obm_3.0	42b92e18-d9ab-567f-988a-4240baled5f7	base
pmml-3.0_4.3	493bcb95-16f1-5bc5-bee8-81b8af80e9c7	base
spark-mllib_2.4-r_3.6	49403dff-92e9-4c87-a3d7-a42d0021c095	base
xgboost_0.90-py3.6	4ff8d6c2-1343-4c18-85e1-689c965304d3	base
pytorch-onnx_1.1-py3.6	50f95b2a-bc16-43bb-bc94-b0bed208c60b	base
autoai-ts_3.9-py3.8	52c57136-80fa-572e-8728-a5e7cbb42cde	base
spark-mllib_2.4-scala_2.11	55a70f99-7320-4be5-9fb9-9edb5a443af5	base
spark-mllib_3.0	5c1b0ca2-4977-5c2e-9439-ffd44ea8ffe9	base

autoai-obm_2.0	5c2e37fa-80b8-5e77-840f-d912469614ee	base
spss-modeler_18.1	5c3cad7e-507f-4b2a-a9a3-ab53a21dee8b	base
cuda-py3.8	5d3232bf-c86b-5df4-a2cd-7bb870a1cd4e	base
runtime-22.2-py3.10-xc	5e8cddff-db4a-5a6a-b8aa-2d4af9864dab	base
autoai-kb_3.1-py3.7	632d4b22-10aa-5180-88f0-f52dfb6444d7	base

Note: Only first 50 records were displayed. To display more use 'limit' parameter.

In [37]:

```
import sklearn
sklearn.__version__
```

Out[37]:

'1.0.2'

In [38]:

```
MODEL_NAME = 'university'
DEPLOYMENT_NAME = 'uni'
DEMO_MODEL = lr
```

In [39]:

```
software_spec_uid = client.software_specifications.get_id_by_name('runtime-22.1-py3.9')
```

In [40]:

```
model_props = {
    client.repository.ModelMetaNames.NAME: MODEL_NAME,
    client.repository.ModelMetaNames.TYPE: 'scikit-learn_1.0 ',
    client.repository.ModelMetaNames.SOFTWARE_SPEC_UID: software_spec_uid
}
```

In [41]:

```
model_details = client.repository.store_model(
    model = DEMO_MODEL,
    meta_props = model_props,
    training_data = X_train,
    training_target = y_train
)
model_details
```

Out[41]:

```
{'entity': {'hybrid_pipeline_software_specs': [],
  'label_column': 'Chance of Admit ',
  'schemas': {'input': [{'fields': [{'name': 'GRE Score', 'type': 'int64'},
    {'name': 'TOEFL Score', 'type': 'int64'},
    {'name': 'University Rating', 'type': 'int64'},
```

```
{'name': 'SOP', 'type': 'float64'},
{'name': 'LOR ', 'type': 'float64'},
{'name': 'CGPA', 'type': 'float64'},
{'name': 'Research', 'type': 'int64'}]],
'id': '1',
'type': 'struct'}],
'output': [],
'software_spec': {'id': '12b83a17-24d8-5082-900f-0ab31fbfd3cb',
'name': 'runtime-22.1-py3.9'},
'type': 'scikit-learn_1.0'},
'metadata': {'created_at': '2022-11-20T11:29:56.678Z',
'id': '0147b362-92b8-45b2-871d-b9db7e8811c4',
'modified_at': '2022-11-20T11:30:03.018Z',
'name': 'university',
'owner': 'IBMid-6630041JHH',
'resource_key': 'ab7b4c64-216d-42ad-a794-5a69c68bb9ae',
'space_id': '4f0253e5-f162-4eec-84ba-72e01fb69ab9'},
'system': {'warnings': []}}
```

In [42]:

```
model_id = client.repository.get_model_id(model_details)
model_id
```

Out[42]:

```
'0147b362-92b8-45b2-871d-b9db7e8811c4'
```

In [43]:

```
deployment_props = {
    client.deployments.ConfigurationMetaNames.NAME:DEPLOYMENT_NAME,
    client.deployments.ConfigurationMetaNames.ONLINE: {}
}
```

```
deployment = client.deployments.create(
    artifact_uid = model_id,
    meta_props = deployment_props
)
```

```
#####
#####
```

```
Synchronous deployment creation for uid: '0147b362-92b8-45b2-871d-
b9db7e8811c4' started
```

```
#####
#####
```

initializing

Note: online_url is deprecated and will be removed in a future release. Use serving_urls instead.

ready

Successfully finished deployment creation, deployment_uid='4d1fe8ed-7ee3-408c-b503-cfbc979bc2e0'

DEMO2.HTML:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta name="viewport" content="width=device-width, initial-scale=1, maximum-scale=1,
user-scalable=no">
  <link rel="stylesheet" type="text/css" rel="noopener" target="_blank"
href="../static/css/styles.css">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
  <script type="text/javascript" src="../static/js/script.js" async></script>
  <title>University Admit Eligibility Predictor</title>
</head>
<body>
  <nav class="navbar navbar-expand-lg bg-light">
    <div class="container-fluid">
      <a class="navbar-brand text-responsive-h" href="/">
        
        University Admit Eligibility Prediction System
      </a>
    </div>
  </nav>

  <div class="p-4">
    <div class="row mb-3">
```

```

<div class="col-4">
  <h2 class="text-responsive-h">
    Enter your details and get probability of your admission
  </h2>
  <p class="text-responsive"> Students are often worried about their chances of getting
admissions in universities. The main objective of this project is to help the students in shortlisting
universities with their profiles. The predicted output gives them a fair idea about their admission chances
in a particular university. This analysis should also help students who are currently preparing or will be
preparing to get a better idea.
  </p>
  <div class="d-flex justify-content-right">
    
  </div>
</div>
<div class="col-8">
  <div class="card p-2 ms-2 my-2">
    <div class="card-body">
      <h5 class="card-title pb-4">
        Enter the details
      </h5>
      <form action="/" method="post" id="theForm">
        <div class="row mb-3">
          <label for="gre" class="col-lg-2 col-form-label">GRE Score:</label>
          <div class="col-lg-10">
            <input type="number" class="form-control" id="gre" name="gre" min="250"
max="340" required>
          </div>
        </div>
        <div class="row mb-3">
          <label for="tofel" class="col-lg-2 col-form-label">TOFEL Score:</label>
          <div class="col-lg-10">
            <input type="number" class="form-control" id="tofel" name="tofel" min="50"
max="120" required>
          </div>
        </div>
        <div class="row mb-3">
          <label for="university_rating" class="col-lg-2 col-form-label">University
Rating:</label>
          <div class="col-lg-10">
            <input type="number" class="form-control" id="university_rating" step="0.01"
name="university_rating" min="1" max="5" required>
          </div>
        </div>
        <div class="row mb-3">
          <label for="sop" class="col-lg-2 col-form-label">SOP:</label> <div class="col-lg-
10">
            <input type="number" class="form-control" id="sop" name="sop" step="0.01"
min="1" max="5" required>
          </div>
        </div>
      </form>
    </div>
  </div>

```

```

        <div class="row mb-3">
            <label for="lor" class="col-lg-2 col-form-label">LOR:</label>
            <div class="col-lg-10">
                <input type="number" class="form-control" id="lor" name="lor" step="0.01"
min="1" max="5" required>
            </div>
        </div>
        <div class="row mb-3">
            <label for="cgpa" class="col-lg-2 col-form-label">CGPA:</label>
            <div class="col-lg-10">
                <input type="number" class="form-control" id="cgpa" name="cgpa" step="0.01"
min="5" max="10" required>
            </div>
        </div>
        <fieldset class="row mb-3">
            <legend class="col-form-label col-sm-2 pt-0">Research:</legend>
            <div class="col-sm-10">
                <div class="form-check">
                    <input class="form-check-input" type="radio" name="yes_no_radio"
id="gridRadios1" value="1">
                    <label class="form-check-label" for="yes_no_radio">
                        Yes
                    </label>
                </div>
                <div class="form-check">
                    <input class="form-check-input" type="radio" name="yes_no_radio"
id="gridRadios2" value="0" checked>
                    <label class="form-check-label" for="yes_no_radio">
                        No
                    </label>
                </div>
            </div>
        </fieldset>
        <div class="row lg-3">
            <div class="col-lg-2 mb-2 me-3">
                <button type="submit" class="btn btn-primary" id="button">Predict</button>
            </div>
            <div class="col-lg-2 id="spinner">
                <div class="spinner-border text-primary m-1" role="status">
                    <span class="visually-hidden">Loading...</span>
                </div>
                <div class="spinner-grow text-primary m-1" role="status">
                    <span class="visually-hidden">Loading...</span>
                </div>
            </div>
        </div>
    </form>
</div>
</div>
</div>
</div>
</div>

```

```

<h1> Index Page </h1>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-OERcA2EqjJCMA+/3y+gxIOqMEjwtxJY7qPCqsdltbNJuaOe923+mo//f6V8Qbsw3"
crossorigin="anonymous"></script>
</body>
</html>

```

CHANCE.HTML:

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta name="viewport" content="width=device-width, initial-scale=1, maximum-scale=1,
user-scalable=no">
  <link rel="stylesheet" type="text/css" rel="noopener" target="_blank"
href="../static/css/styles.css">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
  <script type="text/javascript" src="../static/js/script.js" async></script><title>University Admit
Eligibility Predictor</title>
</head>
<body>
  <nav class="navbar navbar-expand-lg bg-light">
    <div class="container-fluid">
      <a class="navbar-brand text-responsive-h" href="/">
        
        University Admission Eligibility Prediction System
      </a>
    </div>
  </nav>
  <div class="container text-center p-4">
    <div class="d-flex justify-content-center">

      <div class="card" style="width: 34rem;">
        
        <div class="card-body">
          <h5 class="card-title">You Have Chance</h5>
          <p class="card-text">The model has predicted that you have chance</p>
          <a href="/home" class="btn btn-primary">Go Back</a>
        </div>
      </div>
    </div>
  </div>

```

```
</div>
</body>
</html>
```

NO CHANCE.HTML:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <meta name="viewport" content="width=device-width, initial-scale=1, maximum-scale=1,
user-scalable=no">
  <link rel="stylesheet" type="text/css" rel="noopener" target="_blank"
href="../static/css/styles.css">
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
Zenh87qX5JnK2Jl0vWa8Ck2rdkQ2Bzep5IDxbcnCeuOxjzrPF/et3URy9Bv1WTRi"
crossorigin="anonymous">
  <script type="text/javascript" src="../static/js/script.js" async></script>
  <title>University Admit Eligibility Predictor</title>
</head>
<body>
  <nav class="navbar navbar-expand-lg bg-light">
    <div class="container-fluid">
      <a class="navbar-brand text-responsive-h" href="/">
        
        University Admission Eligibility Prediction System
      </a>
    </div>
  </nav>
  <div class="container text-center p-4">
    <div class="d-flex justify-content-center">
      <div class="card" style="width: 34rem;">
        
        <div class="card-body">
          <h5 class="card-title">You have a LOW / NO chance</h5>
          <p class="card-text">The model has predicted that you have no chance</p>
          <a href="/home" class="btn btn-primary">Go Back</a>
        </div>
      </div>
    </div>
  </div>
</body>
</html>
```


SCRIPT.JS:

```
const button = document.getElementById('button');
const theForm = document.getElementById('theForm');
const loading = document.getElementById('spinner');
```

```
const disableButton = () => {
  console.log('Submitting form...');
  button.disabled = true;
  button.className = "btn btn-outline-primary";
  button.innerHTML = "Predicting..."

```

```
  loading.style.display = "block"
};
```

```
const enableButton = () => {
  console.log('Loading window...');
  button.disabled = false;
  button.className = "btn btn-primary"
  button.innerHTML = "Predict"
  loading.style.display = "none"
}
```

```
theForm.onsubmit = disableButton;
```

```
window.onload = enableButton;
```

STYLE.CSS:

```
* {
  margin: 0;
  padding: 0;
  border: 0;
}

body {
  font: 62.5%/1.5 "Lucida Grande", "Lucida Sans", Tahoma, Verdana, sans-serif;
  background: #e0eafc;
  background: -webkit-linear-gradient(to right, #e0eafc, #cfdef3);

  background: linear-gradient(to right, #e0eafc, #cfdef3);
  color: #000000;
  text-align:center;
}
```

```
h1 {
  font-size: 2.2em;
}

h2 {
  font-size: 2.0em;
}

h4 {
  font-size: 1.6em;
}

p {
  font-size: 1.2em;
}

input.text
{
  padding: 3px;
  border: 1px solid #999999;
}

img {
  max-width: auto;
  height: auto;
}

.text-responsive {
  font-size: calc(50% + 0.6vw + 0.6vh);
}

.text-responsive-h {
  font-size: calc(80% + 0.6vw + 0.6vh);
}
```

DEMO VIDEO LINK:

https://drive.google.com/file/d/16-g-xvhjDakRpfNpuZDSPG_fjo89znSJ/view?usp=drivesdk