



HINDUSTHAN INSTITUTE OF TECHNOLOGY

(An Autonomous Institution, Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai, Accredited with "A" Grade by NAAC) Valley Campus, Pollachi Main Ro

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

REPORT ON

**HX 8001 PROFESSIONAL READINESS FOR INNOVATION,
EMPLOYABILITY AND ENTREPRENEURSHIP
(Naalaiya Thiran Program)**

PROJECT TITLE

**UNIVERSITY ADMIT ELIGIBILITY PREDICTOR
TEAM ID: PNT2022TMID10525**

TEAM MEMBERS

1. PAVITHRA.S(TEAM LEAD)
2. PATTA DINESH KUMAR REDDY
3. P. AMULYA CHOWDHARY
4. PRATAP

MENTOR

Mr.A.ABDUL HAYUM

EVALUATOR

Mrs.A.S.NARMADHA

INDEX

1. INTRODUCTION

1.1 Project Overview

1.2 Purpose

2. LITERATURE SURVEY

2.1 Existing problem

2.2 References

2.3 Problem Statement Definition

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

3.2 Ideation & Brainstorming

3.3 Proposed Solution

3.4 Problem Solution fit

4. REQUIREMENT ANALYSIS

4.1 Functional requirement

4.2 Non-Functional requirements

5. PROJECT DESIGN

5.1 Data Flow Diagrams

5.2 Solution & Technical Architecture

5.3 User Stories

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

6.2 Sprint Delivery Schedule

6.3 Reports from JIRA

7. CODING & SOLUTIONING (Explain the features added in the project along with code)

7.1 Feature 1

7.2 Feature 2

7.3 Database Schema (if Applicable)

8. TESTING

8.1 Test Cases

8.2 User Acceptance Testing

9. RESULTS

9.1 Performance Metrics

10. ADVANTAGES & DISADVANTAGES

11. CONCLUSION

12. FUTURE SCOPE

13. APPENDIX

Source Code

GitHub & Project Demo Link

PROJECT REPORT

INTRODUCTION: This project **university admit eligibility predictor** is web based application in which students can register with their personal as well as marks details for prediction the admission in colleges and the administrator can allot the seats for the students. Administrator can add the college details and his representative entrances[GRE,TOEFL,SOP,LOR]. Using this software, the entrance seat allotment became easier and can be implemented using system. The main advantage of the project is the computerization of the entrance seat allotment process. Administrator has the power for the allotment. He can add the allotted seats into a file and the details are saved into the system. The total time for the entrance allotment became lesser and the allotment process became faster.



PURPOSE: In the present schooling system everyone tries to study after bachelors but all the people can't find the right one it can helped every one

LITERATURE SURVEY:

- One amazing work by Acharya et al. has looked at between 4 changed relapse calculations which are: Linear Regression, Support Vector Regression, Decision Trees and Random Forest, to anticipate the opportunity of concede dependent on the best model that showed the least MSE which was multi linear relapse.
- Also, Chakrabarty et al. thought about between both linear regression and gradient boosting regression in foreseeing possibility of concede; call attenuation to that gradient boosting regression showed better outcomes.
- Gupta et al. fostered a model that reviews the alumni affirmation measure in American colleges utilizing AI procedures. The motivation behind this investigation was to direct understudies in tracking down the best instructive establishment to apply for. Five AI models were underlying this paper including Naïve Bayes, SVM (Linear Kernel), AdaBoost, and Logistic classifiers
- Waters and Miikkulainen proposed an astounding article that aides in positioning affirmation application as per the degree of acknowledgment and upgrades the the presentation of inspecting application utilizing measurable AI.
- S. Sujay applied linear regression to anticipate the shot at conceding graduate understudies in expert's projects as a rate. Be that as it may, no more models were performed.

1.METHOD DESCRIPTION:

DATA COLLECTION

The way toward get-together information relies upon the sort of undertaking, for a ML project, real time information is utilized. The informational index can be gathered from different sources like a document, data set, sensor and different sources and some free informational collections from web can be utilized. Kaggle and UCI Machine learning Repository are the storehouses that are utilized the most for information assortment for Machine learning models. Kaggle is quite possibly the most visited site that is utilized for gathering information collections.

PREPROCESSING:

Information pre-processing is a cycle of cleaning the raw information i.e. the information is gathered in reality and is changed over to a perfect dataset. There are certain steps executed to change over the data into a little clean data collection and make it practical for examination, this piece of the information is called as information pre-processing.

2.RESEARCH METHODOLOGY:

Research Question:

Can machine learning algorithms improve the accuracy in prediction the application status of students aspiring to enroll in masters in computer science course at universities in the USA?

METHODOLOGY:

Cross-Industry Standard Process methodology was followed in this research.

BUSINESS UNDERSTANDING: Initially good amount of time was spent on understanding the problem were defined in this process.

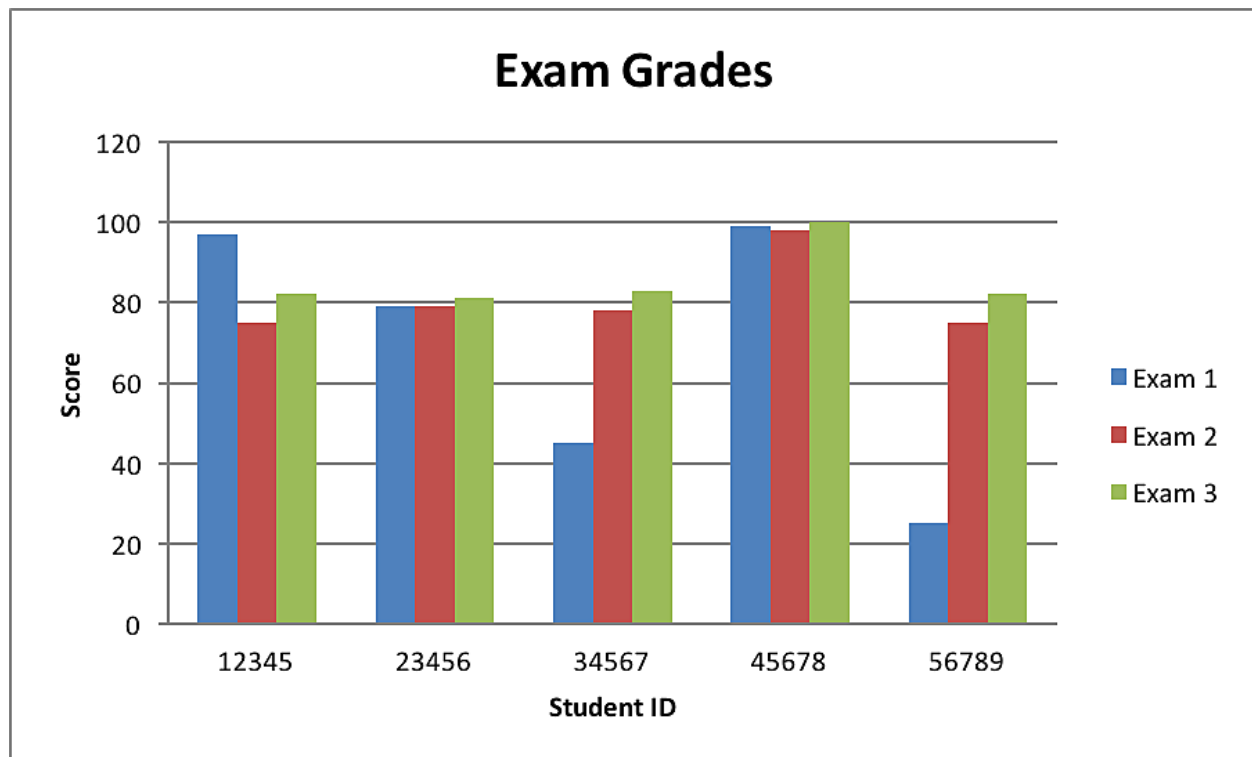


Data Visualization: • After analyzing the data, we will be able to know what the features and labels are, so from the above data, the label we have to consider is Chance of Admission[8] and then we have to consider the parameters that influence or play a major role in Chance of Admission • We can get to know certain features that are more affected by the visualization (or) analysis or the use of feature importance method in

decision tree • Below are some of our data visualizations[9]

	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

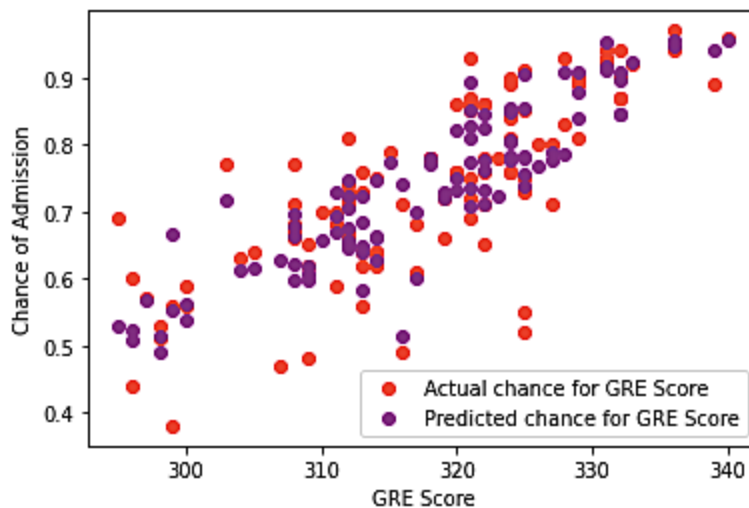
- You can know that without machine learning, the problem is actually solvable. The data cleaning process has several key benefits to it: 1. This eliminates major errors and inconsistencies which are unavoidable when dragging multiple data sources into one dataset.



- You may find missing or noisy data, or anomalies such as the incorrect data form used for a column, incorrect measuring units for a particular column[7], or that there are not enough examples of a specific class.

GRE VS CHNCE ADMIT

*The prediction was based on the various terms here we can compare the both TOEFL AND CHANCE OF ADMIT



- Once the data visualization is done, we have to do predictive modelling for this purpose first we divide the data into train part and test part.
- we will develop model using machine learning algorithms on the train data and test model accuracy on the test data part.
- we will see which algorithms giving highest accuracy according to what parameters and take that for final consideration.

ALGORITHMS:

K-Nearest Neighbors: KNN algorithm is the most commonly used algorithm for classification and regression purpose. KNN stands for k nearest neighbor, here k indicates a integer value which will tell that with how many neighbors comparisons should be made.

It can be used for both classification and regression purpose. Suppose if it is classification and the k value is 5 it will compare with nearest 5 neighbors and gives the mode value, if it is regression and the k value is 6 it will take the nearest six values and return its mean value.

Linear Regression: It is an algorithm based on supervised learning of computers. It does the role of regression. Regression models[6] a predictive goal value based on the independent variables. Mostly it is used to figure out the relation between variables and forecasting. Different regression models vary on the basis—the form of relationship between dependent and independent variables, are considered, and the number of independent variables used.

Ridge Regression: Ridge regression is a regression method that is quite similar to

unadorned minus squares linear regression: simply adding a $\| \beta \|^2$ penalty on parameters β to the linear regression objective function gives the ridge regression objective function.

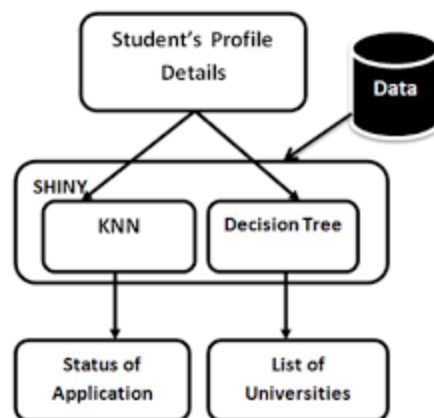
Ridge regression is an example of a shrinkage method: it shrinks the parameter estimates in the hopes of reducing uncertainty, increasing prediction accuracy, and aiding interpretation relative to the least squares.

Random Forest: Random forest is a machine learning algorithm which is a combined effect of classification and regression and other tasks which operate by erection of decision trees at training time and outputs the class that is the mode of the classes or mean value of individual trees.

***On the models have been executed the result will be provided to the student as the output on the user interface**

*More information relating to new colleges and courses can be added to the curriculum in the future. The system may also be modified to a web-based application by making node-red modifications.

To solve the problem, it is possible to test other classification algorithms if they have high accuracy score than the current algorithm, the framework can be easily modified to support the new algorithm by changing the server code in the Node Red.



CASE STUDY 1:

When a student with top grades evaluates his/her profile for admission in colleges Ranked in Top 10 to Top 40 in the USA. Below is the screen-shot of the user interface before submitting the student profile

Student Admission Predictor

Select University
Arizona State University

GRE Score
130

Language Score
6.5

UGPA Score
2.5

SOPI Rating
3

LCR Rating
3

Work Experience in Months
10

Gender
☐ Male
☐ Female

Season
☐ Fall
☐ Spring

Submit

Case Study 2:

When a student with bad grades evaluates his/her profile for admission in universities ranked Top 10 to Top 30 in the USA. Below is the screen-shot of the user interface before submitting the student profile details.

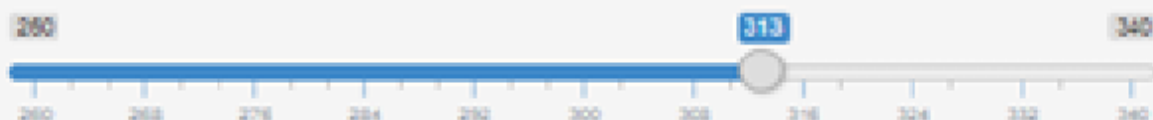
Below is the output, showing the student has no chance of getting admission in the Texas A & M University and it advises the student to try in the list of universities which are suitable for their profile. Also as the student profile is below average it is recommended that the student should try applying in the universities which

Student Admission Predictor

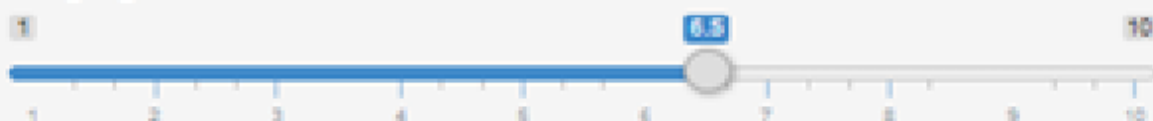
Select University

University of Illinois at Chicago

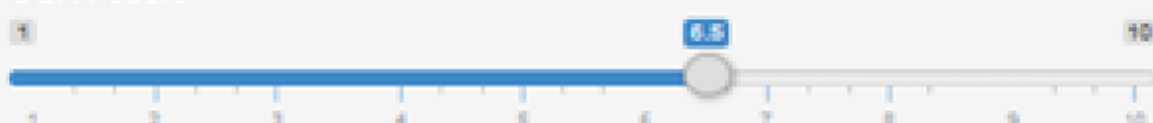
GRE Score



Language Score



UGPA Score



SOP Rating



LOR Rating



Work Experience in Months

10

Intake

- ☐ Fall
- ☒ Spring

Submit

Conclusion and Future Work :

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 the USA. Multiple machine learning algorithms were developed and used for this research. KNN proved to best-fit for development of the system when compared with the Logistic regression model.

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%. Decision Tree algorithm was used to predict the universities which were best suitable for a student based on their profile. The decision tree algorithm proved to be 80% accurate. A simple user interface was developed to make the application interactive and easy to use for the users from the non-technical background. Shiny library from R was used to create the user interface.

The overall objective of the research was achieved successfully as the system allow the students to save the extra amount of time and money that they would spend on education consultants and application fees for the universities where they have fewer chances of securing admission. Also, it will help the students to make better and faster decision regarding application to the universities. As discussed earlier in the limitation of the research we have created the models based only on the data of Indian Students studying Masters in Computer Science in the USA, we have considered only ten universities with different rankings.

In future, more data related to additional universities and courses can be added to the system. Also, the system can be enhanced to a web-based application by making changes to the Shiny code. Other classification algorithms can be evaluated to resolve the problem if they perform better than the current algorithm the system can be easily updated to support the new algorithm by changing the server code in the Shiny app

Acknowledgment :

I would like to thank my thesis supervisor Mr Pierpaolo Dondio for all the support and guidance he has provided me with his profound knowledge, motivation and kindness.

Also I would like to pay my gratitude towards all the immensely talented professors from National College of Ireland from whom I was able to learn in deep about Data Analytics.

IDEATION AND PROPOSED SOLUTION:

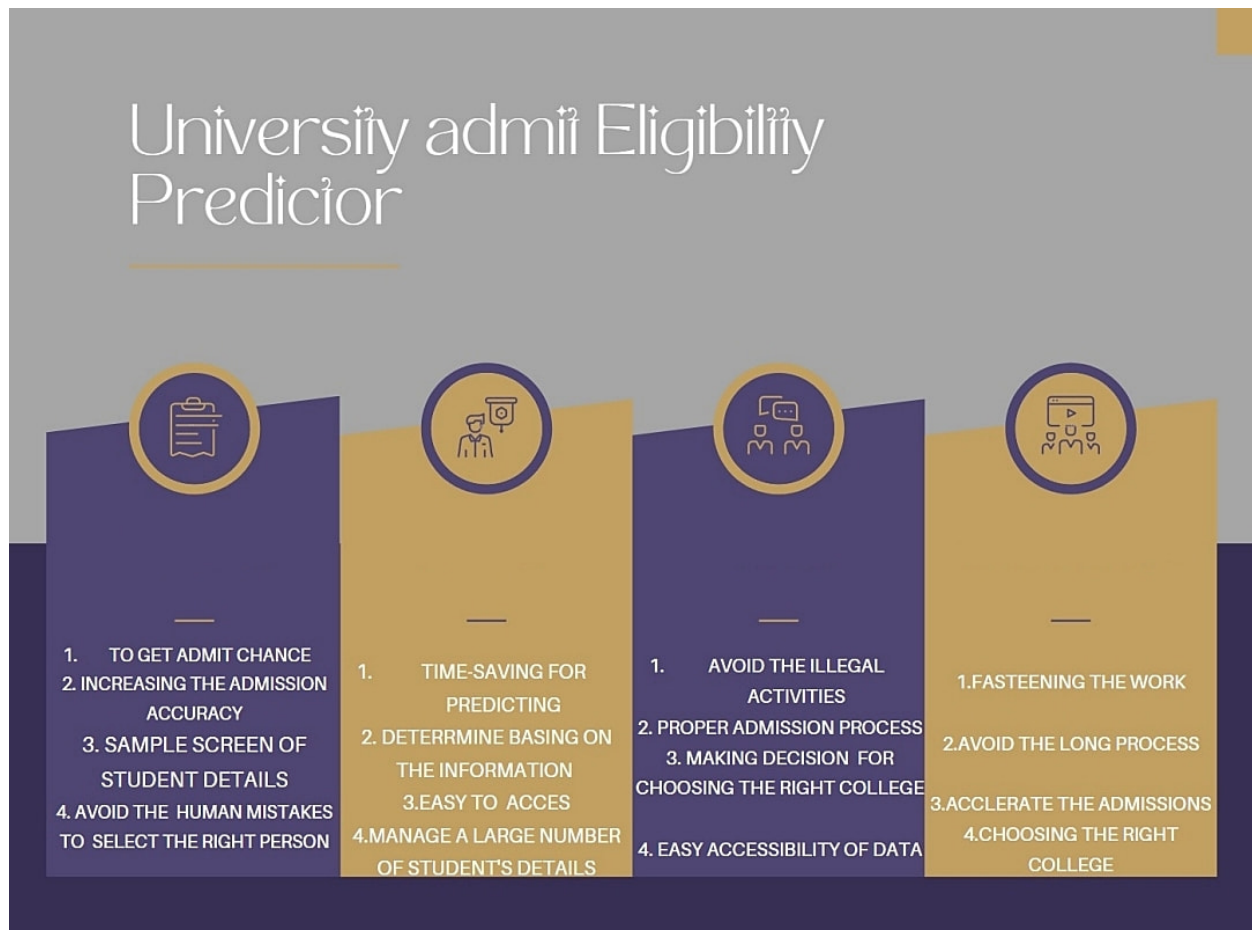
EMPATHY MAP



the above empathy map can says what are the basic requirements and what are the different functions that can evaluate in the mentioned project

- *the pain can describe what are the total drawbacks about the project
- *the gain can describe what are the total advantages about the project

IDEATION & BRAINSTORMING



various ideation was mentioned over there and basing on the ideas mentioned above the project was led into various terms and got the exact results that were mentioned over the data set

various ideas were led to turn up the projects in multiple angles and achieve the outstanding results as we want

Mainly the brainstorming is used to get the total allover

synopsis about the project in a single overview and get the full observation about the project.

PROPOSED SOLUTION

Proposed Solution Template:

The project team shall fill in the following information in the proposed solution template.

Description	parameter	S.No
A student will have to go through many obstacles to select the best universities or schools for education. Most students are required to submit applications to the colleges where they may have little chances of being accepted. As a result, students from low income backgrounds experience a tension and anxiety as they not only lose money for applying to college but also lose a sense of self-confidence.	Problem Statement (Problem to be solved)	1
It takes a lot of time and effort to conduct university and college research, which is one of the requirements for applying to universities. This problem, which is a major one for students, has not yet been resolved. There are reputable websites that rank the top colleges and universities according to factors like	idea /solution description	2

location, cost of attendance, degree offered, and major, but none of them utilize a machine learning algorithm to do it. As a result, we conducted this research to partially address that problem using data mining approaches.		
The university application procedure is a time-consuming effort. Students must put up a lot of effort and perseverance to finish the entire application procedure. If students were relieved of the responsibility of choosing the top schools and institutions for their applications, life would be much simpler for them.	Novelty/uniqueness	3

PROBLEM SOLUTION FIT

1.CUSTOMER SEGMENTS

a.the eligible students who have completed schooling and their under-graduate

b.A number of students who need financial support and are need in resources to pursue higher education

3.Triggers

a.students frequently become stressed and worried about their selected institutions

b.However,their friends may have access to many colleges,allowing them to make a more cost and time-effective decision.

2. Jobs To Be Done/Problems

- a. The main aim is to create a system for predicting university admission and provide a system
- b. Finding the ideal university and course for one's post-graduation studies can be a difficult task for students
- c. The students are to be given a list of colleges where admission is possible so that the student can select from the list.

4. Emotions: Before/After

- a. Before: struggling to choose the best university due to insecurity and procedure ignorance
- b. After: safe, user-friendly to choose the best universities
- c. The students are to be given a list of colleges where admission is possible so that the student can select from the list.

5. CUSTOMER CONSTRAINTS

- a. To search for the best suited and affordable college for the studies admissions
- b. To reduce the financial concerns for a student
- c. to reduce travel expenses

6. PROBLEM ROOT CAUSE

- a. There might not be a single resource to universities
- b. The student might not be aware of the requirements for admission to various colleges across the world

7. Available Solutions

- a. What does your customer do to address the problem and get the job done directly
- b. direct: the student will make an effort to visit all of the universities where he or she students there.

1. it can explain the various terms that are all used in the university admit eligibility prediction for several of domains to evaluate the referenced values and predict the percentage or boolean

8. Behaviour

- a. lacks scalability and dynamic character.
- b. Insufficient training data.
- c. direct: the student will make an effort to visit all of the universities where he or she students there.

operation of the studen.

REQUIREMENT ANALYSIS

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	<ul style="list-style-type: none">• The system doesn't require any prior technical knowledge from the user, thus even a novice user can access it.• The user interface would prioritize recognition over recall.• User friendly• Pay attention to internal sources of control• It wouldn't take long for the content to load and show (30 seconds).• The fields in the site would be selfexpla
NFR-2	Security	<ul style="list-style-type: none">• Only the authenticated user will be able to use the site's services.• The database should be backed up every hour.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Details	Submit the documents • GRE or/and TOEFL scoresheet • Curriculum Vitae (CV) • Letter of Recommendation • Statement of Purpose (SoP)
FR-4	User Requirements	<ul style="list-style-type: none">• Upload all essential documents to the website's appropriate location.• The system would extract all essential data based on the uploads.• Based

		on the information that was scraped, a list of every potential university for the candidate would be displayed.
--	--	---

Non-functional Requirements:

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

NFR-3	Reliability	<ul style="list-style-type: none"> • Due to the value of data and the potential harm that inaccurate or incomplete data could do, the system will always strive for optimum reliability. • The system will be operational every day of the week, 24 hours a day.
NFR-4	Performance	<ul style="list-style-type: none"> • The website can efficiently handle traffic by responding to requests right away. • A 64-kbps modem connection would take no longer than 30 seconds to see this webpage (quantitatively, the mean time)
NFR-5	Availability	<ul style="list-style-type: none"> • Low data redundancy • reduced error risk, quick and effective
NFR-6	Scalability	<ul style="list-style-type: none"> • A significant number of users must be able to access the system simultaneously because an academic portal is essential to the courses that use it. • The system will likely be most stressed during the admissions season. • Therefore, it must be able to handle several users at once.

PROJECT DESIGN

DATA FLOW DIAGRAMS:

Data Flow Diagrams:

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.

ZERO LEVEL DATA FLOW DIAGRAM OF UNVIERSITT ADMIT ELIGIBILITY:

This is the zero level dfd of universtity admisssion managemnts system,where we have overview of the whole universitt admission management system of process being analyzed cours.

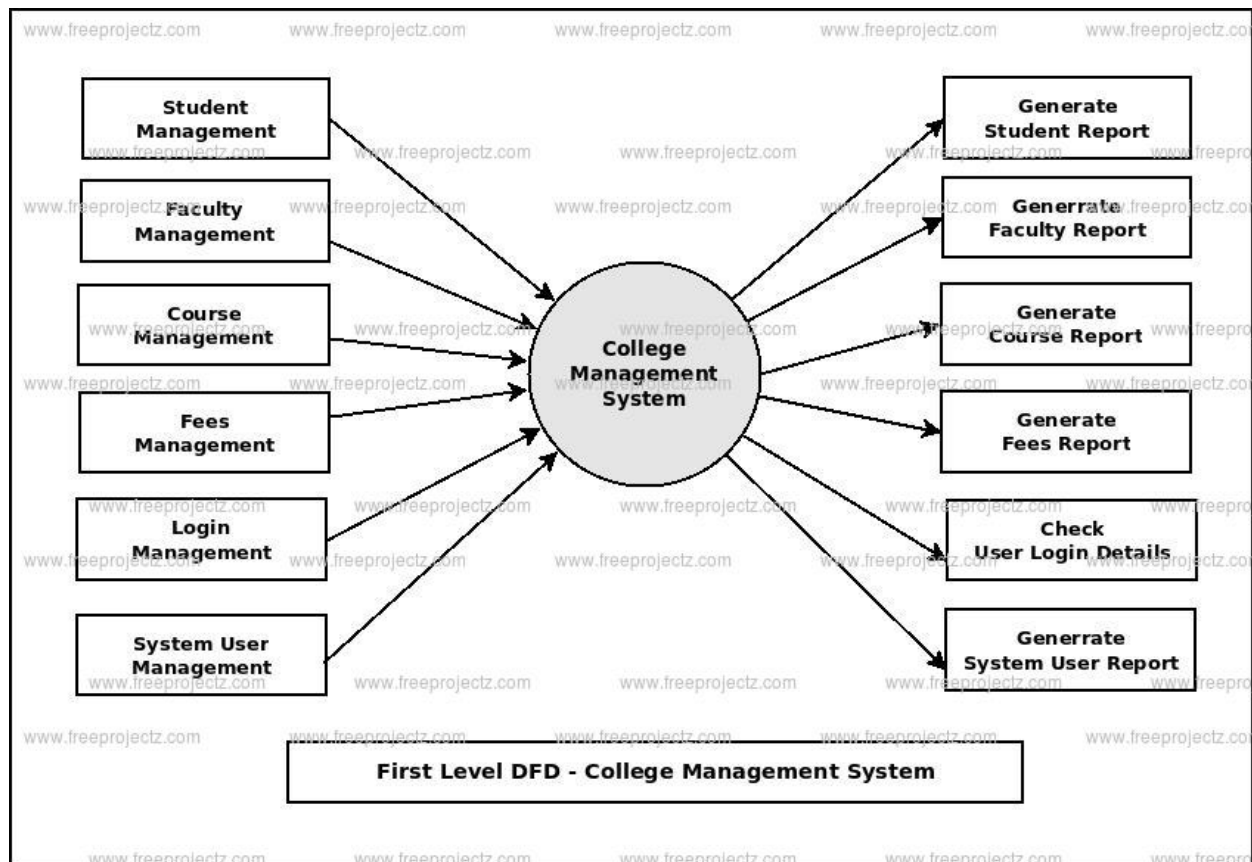
degree and enterance exam showing thee system as a single high-level procsss,ww and student.It should bee easily undestood by a wide audiecncce,including unversity of the universiyt system



FIRST LEVEL DATA FLOW DIAGRAM OF UNVIERSITT ADMIT ELIGIBILITY:

This is the first level dfd of universtity admisssion managemnts system,where we have overview of the whole universitt admission management system of process being analyzed course.

degree and enterance exam showing thee system as a single high-level procsss,ww and student.It should bee easily undestood by a wide audiecncce,including unversity of the universiyt system



SECOND LEVEL DATA FLOW DIAGRAM OF UNVIERSITT ADMIT ELIGIBILITY:

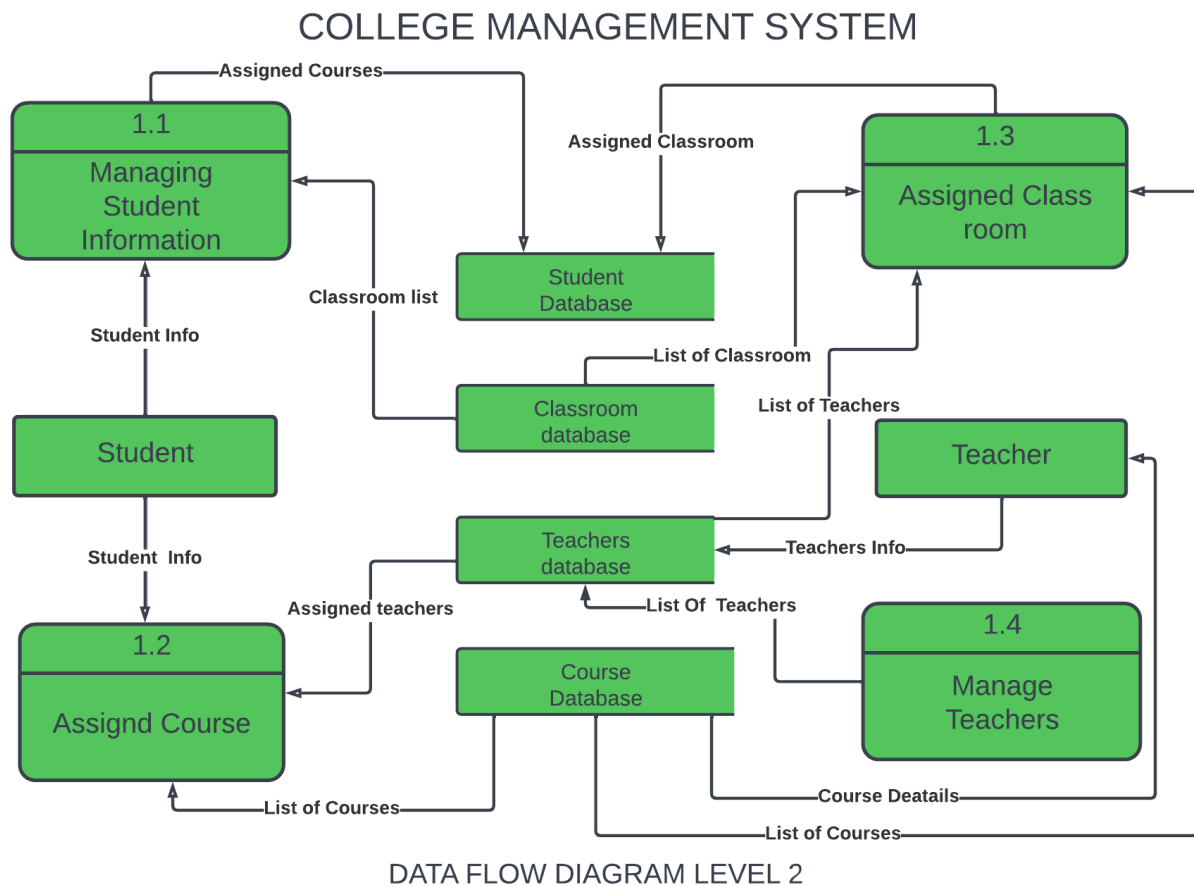
This is the second level dfd of university admission managemnts system,where we have overview of the whole universitt admission management system of process being analyzed course

degree and enterance exam showing thee system as a single high-level procss,ww and student.It should bee easily undestood by a wide audiecnce,including unversity of the universiyt system

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.



TECHNICAL ARCHITECTURE:

In this section, we will describe the architecture of the Student Admission Predictor system. The figure below explains the flow of the system:

- The student will enter his/her profile details using the user interface developed in shiny. • The user interface code will interact with the KNN and Decision Tree models to provide the users with the required result.

- The KNN algorithm will be used to determine the chance of the student of securing admission in a particular university based on his/her profile

- The Decision Tree algorithm will be used to determine the rank of college to which is most suitable for the student based on his/her profile and provide the student with the list of universities which fall in that rank.

- Once the models have been executed the result will be provided to the student as the output

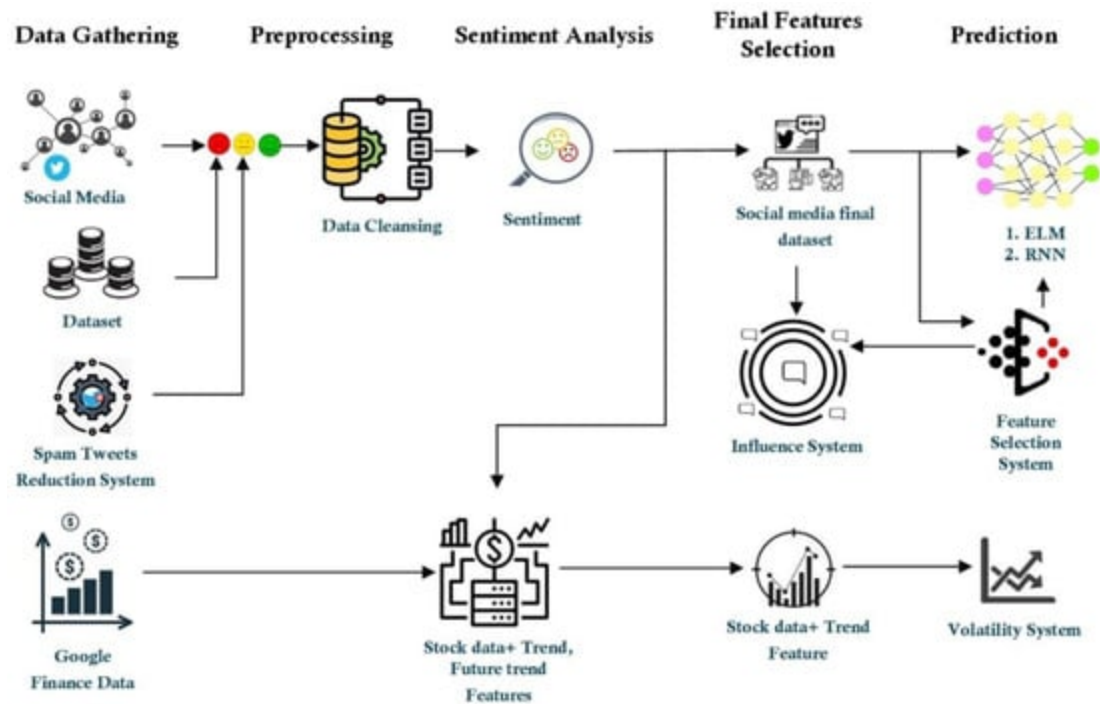


Table-1 : Components & Technologies:

S.No	COMPONENT	TECHNOLOGY
1	User Interface	Html, CSS, Flutter
2	Application Logic-1	PYTHON
3	Application Logic-2	IBM Watson
4	Machine Learning Model	RANDOM FOREST

Table-2: Application Characteristics:

S.NO	CHARACTERSTICS	TECHNOLOGY
1	Open-Source Frameworks	Flask
2	Performance	It can handle about 100 requests per second

PROJECT PLANNING & SCHEDULING

Product Backlog, Sprint Schedule, and Estimation

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1		USN-1	As a user, I will be able to register my application by entering my email, password, and confirming my password.	2	High	MAKA GOPI RAJU
Sprint-2		USN-2	As a user, I will be able to receive an email confirmation after registration.	1	High	MADHAN
Sprint -1		USN-3	As a user, I can register for the application through Gmail	2	Low	MANEESHWARAN
Sprint -2		USN-4	As a user, I can log into the application by entering email & password	1	High	MANOJ



Sprint	Total Story Points	Duration	SPRINT START DATE	SPRINT START DATE	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	USN-1	01 NOV 2022	2	High	MAKA GOPI RAJU
Sprint-2	20	USN-2	05 NOV 2022.	1	High	MADHAN
Sprint -3	20	USN-3	09 NOV 2022	2	Low	MANEESHWARAN
Sprint -4	20	USN-4	14 NOV 2022	1	High	MANOJ

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)



CODING AND SOLUTIONING

FEATURE 1:

HTML

```
1
2 <html>
3   <head>
4     <script
      src="https://kit.fontawesome.com/d020e05036.js"
      crossorigin="anonymous"></script>
5     <link rel="stylesheet"
      href="https://fonts.googleapis.com/css?family=Sofia&effect=
      fire">
6
7
8   </head>
9   <style>
10    body{
11      background-image:
12      url("http://cdn.artwallpaperhi.com/1920x1200/20121019/archi
13      tecture%20london%20university%20of%20london%201920x1200%20w
14      allpaper_www.artwallpaperhi.com_36.jpg");
15    background-attachment: fixed;
16    background-size: 100%;
17    background-repeat: no-repeat;
18  }
19
20  main{
21    background-color:transparent;
22    color:rgb(255, 166, 0);
23    border-radius: 10px 10px;
24    margin-left: 500px;
25    width: fit-content;
26    padding: 35px 35px;
```

```
25 _____ font-size: 30px;
26 _____ box-shadow: 2px 2px 2px 2px gold;
27 _____ }
28 _____ abtest{
29 _____ margin-left: 10px;
30
31
32 _____ }
33 _____ vehicle{
34 _____ margin-left:10px;
35
36 _____ }
37 _____ block{
38 _____ margin-left: 20px;
39 _____ }
40
41 .a{
42 _____ background-color: red;
43 _____ color:white;
44 }
45
46 .a:hover{
47 _____ background-color: blue;
48 _____ color: white;
49 }
50
51 .b{
52 _____ font-size: 40px;
53 _____ box-shadow: 2px 2px blueviolet;
54 _____ border-radius: 5px 5px;
55 }
56 .b:hover{
57 _____ background-color:grey;
58 _____ color: white;
59
60
61 }
```

```

62 .z{
63     font-size: 25px;
64     background-color: transparent;
65     color: white;
66 }
67 .z:hover{
68     background-color: burlywood;
69     color: white;
70 }
71 </style>
72 <body>
73     <form action="{ { url_for('predict') } }"
       method="post">
74
75
76     <h1 class="font-effect-fire" style="font-
       size:60px;text-align:center;font-family:Century
       Gothic;"><span style="color: red;">UNIVERSITY</span><span
       style="color: pink;">ADMIT</span><span style="color:
       green;">ELIGIBILITY</span><span style="color:
       blue;">PREDICTION</span></h1>
77
78     <main>
79     <block>
80
81     <p style="margin-left: 75px;" >GRE<input type="number"
       name="GRE Score" style="margin-left:10px ;border: 1px solid
       white;border-radius: 5px 5px;padding: 8px 8px;border: 1px
       solid black;background-color:transparent;font-
       size:25px;color:white;border: 1px solid
       white;"placeholder="enter between 0-350"></p>
82     <p style="margin-left: 35px;">TOEFL<input name="TOEFL
       Score" required="required" type="number" style="border-
       radius: 5px 5px;border: 1px solid white;padding: 8px
       8px;margin-left:20px;background-color:transparent;font-
       size:25px;color:white;" placeholder="enter between 0-

```

```

120"></p>
83 <label
for="UNIVERSITY">select_university_rating</label>
84 <select id="UNIVERSITY" name="University
Rating" required="required" class="z">
85 <option value="0" style="background-
color:blue;">0</option>
86 <option value="1" style="background-
color:blue;">1</option>
87 <option value="2" style="background-
color:blue;">2</option>
88 <option value="3" style="background-
color:blue;">3</option>
89 <option value="4" style="background-
color:blue;">4</option>
90 <option value="5" style="background-
color:blue;">5</option>
91
92 </select>
93 <p style="margin-left: 73px;">SOP<input
type="number" required="required" name="SOP" style="border-
radius: 5px 5px;padding: 8px 8px;border: 1px solid
white;margin-left:20px;background-color:transparent;font-
size:25px;color:white;" placeholder="enter between 0-5"></p>
94 <p style="margin-left: 70px;">LOR<input type="number"
required="required" name="LOR" style="border-radius: 5px
5px;padding: 8px 8px;border: 1px solid white;margin-
left:20px;background-color:transparent;font-
size:25px;color:white;" placeholder="enter between 0-
5"></p>
95 <p style="margin-left: 55px;">CGPA<input name="CGPA"
required="required" type="number" style="border-radius: 5px
5px;border: 1px solid white;padding: 8px 8px;margin-
left:20px;background-color:transparent;font-
size:25px;color:white;" placeholder="enter between 0-
10"></p>
96 <label for="Research" style="margin-left: 50px;">

```

```

    Research</label>
97 <select name="Research" class="z">
98
99
100 <option value="0"style="background-color:blue;">0</option>
101 <option value="1"style="background-
    color:blue;">1</option>
102
103 </select>
104
105 _
106 </block>
107 </main>
108
109 <br>
110 <button class="a"style="color:white;padding: 5px
    5px;text-align: center;margin-left: 680px;font-size:
    30px;cursor: pointer;border-radius:10px 10px;background-
    color:red;font-size:25px;color:white;border:1px solid
    white">
111 SUBMIT
112 </button>
113 </form>
114 <h3 style="font-size: 40px;color:white;background-
    color:rgba(0, 96, 128, 0.744);width:fit-content;padding:5px
    5px;text-align:center;margin-left:600px;">{{
    prediction_text }}<h3></h3>
115 </body>
116 </html>

```

FEATURE 2:

FLASK

```

1 from flask import Flask, render_template, request
2 import requests
3 import pickle
4

```

```

5  app = Flask(__name__)
6  model = pickle.load(open('university.pkl','rb'))
7  @app.route('/',methods=['GET'])
8  def Home():
9      return render_template('index.html')
10
11 @app.route("/predict", methods=['POST'])
12 def predict():
13     if request.method == 'POST':
14         GRE= int(request.form['GRE Score'])
15         TOEFL=int(request.form['TOEFL Score'])
16         select_university_rating=int(request.form['University Rating'])
17         SOP=float(request.form['SOP'])
18         LOR=float(request.form['LOR'])
19         CGPA=float(request.form['CGPA'])
20         Research=int(request.form['Research'])
21
22
23         prediction=model.predict([[GRE,TOEFL,select_university_rating,SOP,LOR,CGPA,Research]
24                                     ])
25         output=prediction
26         if output==True:
27             return render_template('index.html',prediction_text="Chance")
28         else:
29             return render_template('index.html',prediction_text="No Chance")
30         else:
31             return render_template('index.html')
32 if __name__=="main":
33     app.run(debug=True)

```

TESTING

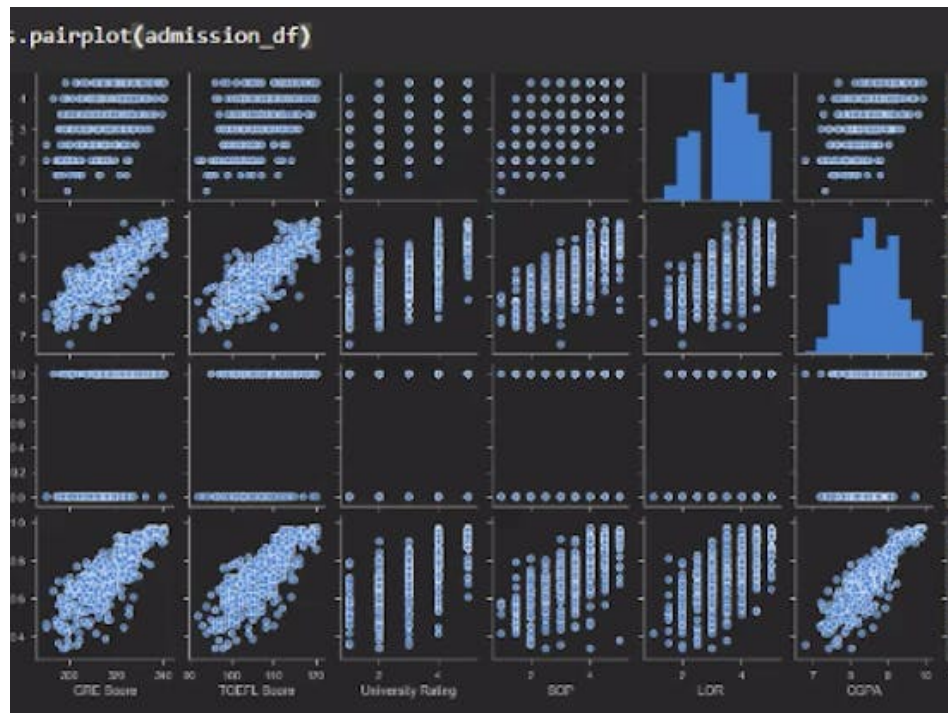
TESTING REPORT

Testing of an individual software component or module is termed as Unit Testing. It is typically done by the programmer and not by testers, as it requires detailed knowledge of the internal program design and code.

The Code was developed in 3 separate parts-

1. AI Model developed using Jupyter Notebook
2. Web Front end was developed using VS Code
3. Backend Database was developed using MongoDB

PROJECT NAME	UNIVERSITY PREDICT
PROJECT TYPE	APPLIED DATA SCIENCE
DEVELOPER	GOPI RAJU
LANGUAGE	PYTHON,HTML,CSS,JAVA SCRIPT
TOTAL NUMBER OF TEST CASES	50
NUMBER OF TEST CASES EXECUTED	49
NUMBER OF TEST CASES PASSED	45
NUMBER OF TEST CASES FAILED	4-DUE TO TECHNICAL ISSUES



IISC Bangalore Application Process 2021

Step 1

- Visit the official website of IISC

Step 2

- Click on the “Admission” section

Step 3

- Read the admission notification

Step 4

- Click on the “Apply Online” link

Step 5

- Fill and submit the application form

UNIT TESTING:

Unit testing is carried out screen-wise, each screen being identified as an object. Attention is diverted to individual modules, independently to one another to locate errors. This has enabled the detection of errors in coding and logic. This is the first level of testing. In this, codes are written such that from one module, we can move onto the next module according to the choice we enter.



SYSTEM TESTING:

In this, the entire system was tested as a whole with all forms, code, modules and class modules. System testing is the stage of implementation, which is aimed at ensuring that the system works accurately and efficiently before live operation commences.

It is a series of different tests that verifies that all system elements have been properly integrated and perform allocated functions.

System testing makes logical assumptions that if all parts of the system are correct, the goal will be successfully achieved. Testing is the process of executing the program with the intent of finding errors.

Testing cannot show the absence of defects, it can only show that software errors are present.



RESULTS

File | C:/Users/dinesh/Documents/index.html

UNIVERSITY ADMIT ELIGIBILITY PREDICTION

GRE enter between 0-350

TOEFL enter between 0-120

select_university_rating 0 ▾

SOP enter between 0-5

LOR enter between 0-10

CGPA enter between 0-10

Research 0 ▾

SUBMIT

Windows taskbar icons: Windows Start, Search, Task View, Edge, File Explorer, Mail, Teams, OneDrive, VS Code, and system tray with volume, network, and language (ENG IN) indicators.

***By clicking the referred values in the above html above page then we can get the admit chance basing on the information stored in the dataset what we have**
***here is the data set value information we have it.**

	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

***if the chance of admittance is greater than 0.5 then it means chanced to get admitted if it was less than 0.5 then there is no chance to go through the college.**

***IF CHANCE OF ADMIT > 0.5 ELIGIBLE SUCCESFULLY**

|

***IF CHANCE OF ADMIT <0.5 NOT ELIGIBILL**



CHANCE OF ADMIT > 0.5



CHANCE OF ADMIT < 0.5

ADVANTAGES:

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

DISADVANTAGES:

- computer literacy and network access
- **Low Computer Literacy**
- **Security Concerns**
- **Authenticity**
- **Infrastructural Requirement.**

CONCLUSION:

This system, being the first we have created in PHP, has proven more difficult than originally imagined. 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. Every time progress was made and features were added, ideas for additional features or methods to improve the usability of the system made themselves apparent.

Furthermore, adding one feature meant that another required feature was now possible, and balancing completing these required features with the ideas for improvement as well as remembering everything that had to be done was a project in itself. Debugging can sometimes be a relatively straight forward process, or rather finding out what you must debug can be.

Since so many parts of the admission system are integrated into one another, if an error occurs on one page, it may be a display error, for example; it may be the information is not correctly read from the database; or even that the information is not correctly stored in the database initially, and all three must be checked on each occasion.

This slows down the process and can be frustrating if the apparent cause of a problem is not obvious at first. Language used must be simple and easy to understand and compatibility is paramount. If this system were not designed as an entirely web based application, it would not have been possible to recreate its current state of portability. Overall, the system performs well,

Furthermore, adding one feature meant that another required feature was now possible, and balancing completing these required features with the ideas for improvement as well as remembering everything that had to be done was a project in itself. Debugging can sometimes be a relatively straight forward process, or rather finding out what you must debug can be.

Since so many parts of the admission system are integrated into one another, if an error occurs on one page, it may be a display error, for example; it may be the information is not correctly read from the database; or even that the information is not correctly stored in the database initially, and all three must be checked on each occasion.

This slows down the process and can be frustrating if the apparent cause of a problem is not obvious at first. Language used must be simple and easy to understand and compatibility is paramount. If this system were not designed as an entirely web-based application, it would not have been possible to recreate its current state of portability. Overall, the system performs well,

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 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.



REFERENCES:

- [1] Borah M.D., Application of knowledge based decision technique to predict student enrolment decision , Recent Trends in Information Systems (Re TIS), 21-23 Dec. 2011,180-184.
- [2] Ragab, A.H.M. , Hybrid recommender system for predicting college admission, Intelligent Systems Design and Applications (ISDA), 29 Nov. 2012, 107-113.

APPENDIX:

*[GIT HUB](#)

.

*[PROJECT DEMO](#)



Pattadineshkumarreddy