UNIVERSITY ADMIT ELIGIBILITY PREDICTOR

PROJECT REPORT

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TEAM ID :PNT2022TMID49628

BACHELOR OF ENGINEERING IN ELECTRONICS AND COMMUNICATION ENGINEERING

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1. INTRODUCTION

1.1 PROJECT OVERVIEW:

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.

1.2 PURPOSE:

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.

LITERATURE SURVEY

YEAR	AUTHORS	OBJECTIVES	METHODOLOGY	LIMITATIONS
2017	Mr.Pierpao lodondio	The principle objective of the research is to help the students whoare aspiringto pursue their education in the USA. The SAP system will help them to evaluate the chances of the success in the particular university without being depended on anyeducation consultancy firm. It will help them in saving a huge amount of time and money spent in the application process .	Cross industry standard process (CRISP) Methodology(Azevdo 2008) was followed in the research. Business understanding , data understanding , data preparation , modelling , evaluation and deployment .	Student admission predictor system will only take into consideration the datarelated to the Indian students pursuing masters in computer sciencefrom universities in the USA.

2020	Mr. Jubail	Earlier studentperformance prediction can help universities to provide timelyaction , like planning for appropriate training to improve studentssuccess gate . Exploring educational data can certainly helpin achieving the desirededucational goals.(By applying EDM Techniques it is possible to develop prediction models to improve student success), However using data mining techniques can be daunting and challenging for non-technical person.	Earlier student performance prediction can help decisionmakers to provide needed actions at the right movement, and to planning the appropriatetraining order to improve the student rate several studies have been published in using data mining methods to predictstudents academic success. One can observe several levelstargeted. ~Degree Level ~Year Level ~Course Level ~Exam Level In this study literature relatedto the exam level is excludedas the outcome of a single exam does not necessarilyimply a negative outcome.	Despite the many dedicated softwaresthis is stillnot a straight forward process, involving many directions .

Problem Statement:

Now a days The students having a confusion to choosing the right college for their studies they have a confusion to list their choice of universities according to their marks. They must pay tremendous amounts of money in consulting feesfor this. The application 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. By this application the studentsmaking decision for choosingand listed a prominent college.

Who doesthe problem affect?	Students
What are the boundaries of theproblem?	Counselling conducted in colleges,Online Websites.
What is the issue?	The students have difficulty in finding the best colleges with respect to their marks.
When doesthe issue occurs?	While searching for future studies the students face issue.In counselling also theyface this issue.

Where is the issueoccurring?	The issue occurs among the students, searching for a good university and while attending the counselling.

Why is it important that we fix the problem?	By solving this issue, students can easily accessthe website and get a clear idea for choosing the best college for themwith their marks.

IDEATION & PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS

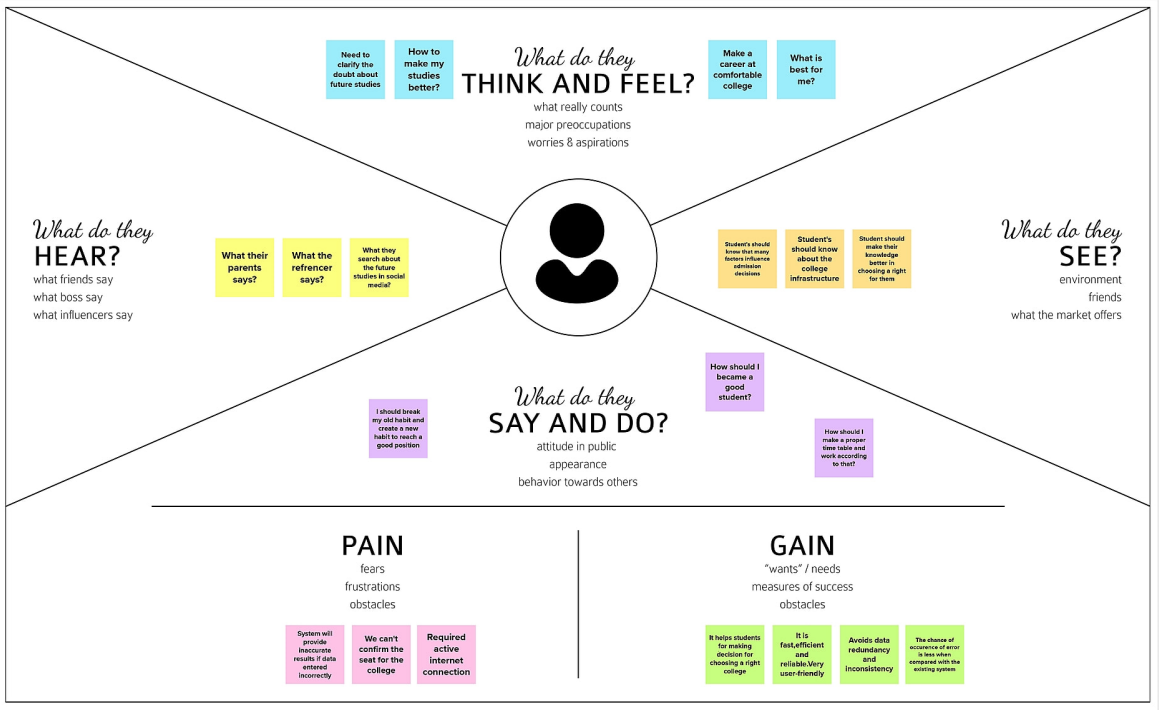
Edit this template
Right-click to unlock

Empathy Map Canvas

Gain insight and understanding on solving customer problems.

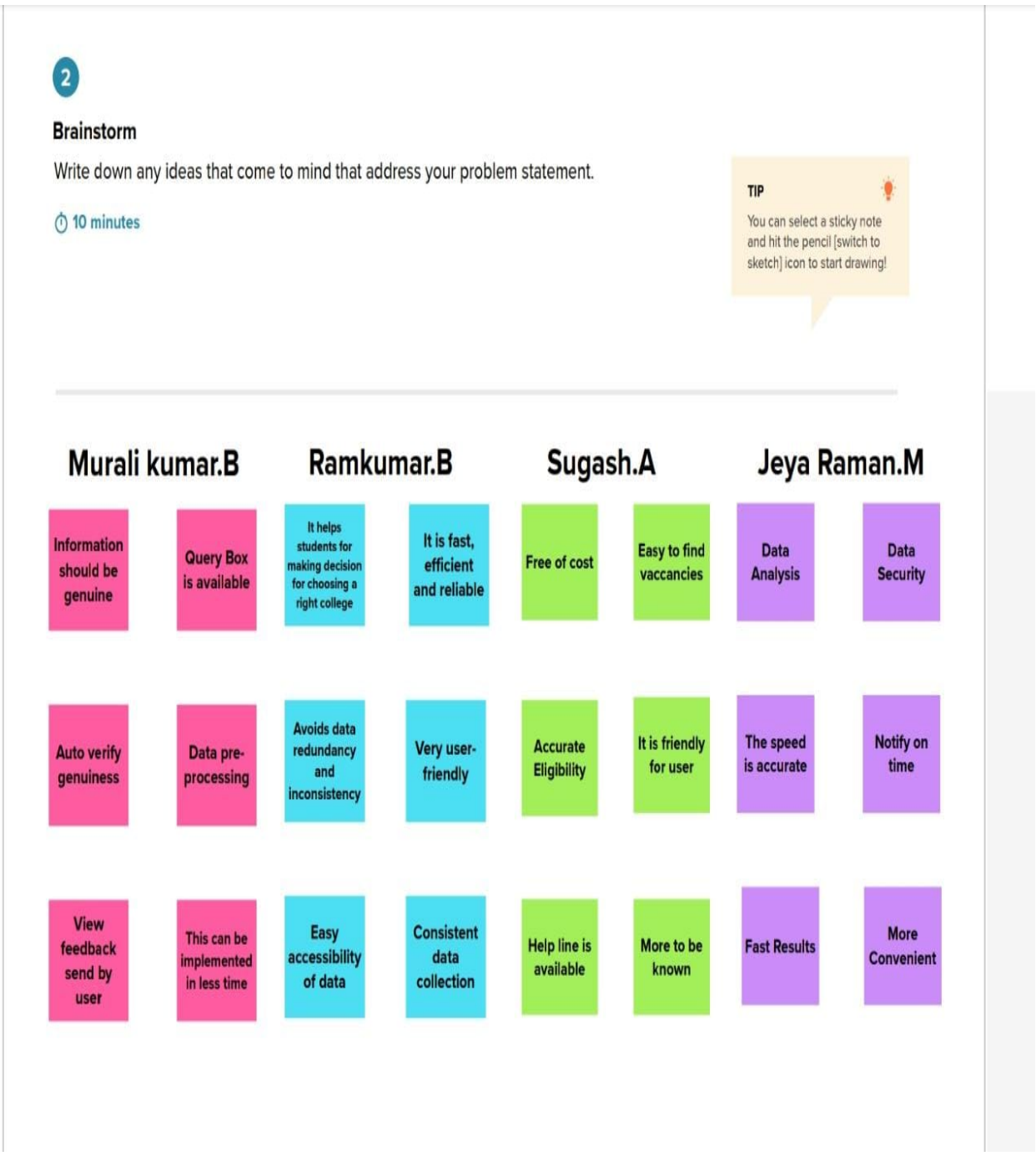
1 This empathy map is based on the project which helps the students in the admission process to their desired universities.

Build empathy and keep your focus on the user by putting yourself in their shoes.



Share your feedback

BRAINSTORMING :



3.3 PROPOSED SOLUTION:

Date	24 September 2022
Team ID	PNT2022TMID49628
Project Name	University Admit Eligibility Predictor

Proposed Solution Template:

S.No.	Parameter	Description
1.	**Problem Statement (Problem to besolved)**	Now a days the students are facing a difficulty in choosing a best and reputable college for their future studies according to their marks. A university admit eligibility predicator is a websitecan do it all with the click of a button.This website is used for astudents to clarify whether they are eligible or not for a university according to theirmarks.
2.	**Idea / Solutiondescription**	This website solvea students difficulty in findinga good college for their studies by calculating their cutoffand shows whetherthey are eligible or not for the universities listed by them. .
3.	**Novelty / Uniqueness**	The website has a helpline where the users clear the queries and ML algorthmis to find betterresult.
4.	**Social Impact / Customer Satisfaction**	It will help the students to list theirinterested colleges and solve a difficulty in finding a good college for their studies.
5.	**Business Model (Revenue Model)**	We can collaborate with government and it can utilize the website to help the students who are want to know if they are eligible or not for the universities listed by them
6.	**Scalability of the Solution**	This application has capacity to handle largenumber of users at a same time.

3.4 PROBLEM SOLUTION FIT:

REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS:

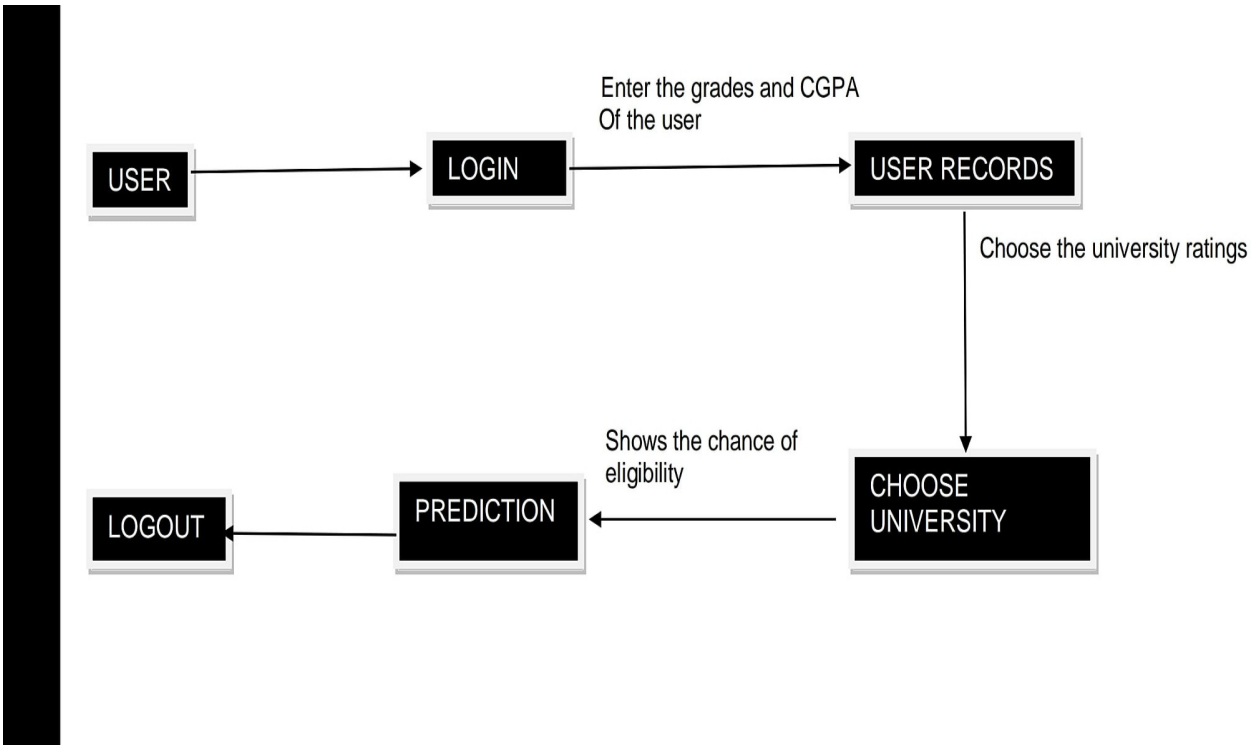
FR No.	Functional Requirement (Epic)	Sub Requirement (Story/ Sub-Task)
FR-1	User Login	● Login into the application
FR-2	User filling the Required details	● Enter the grade&CGPA ● Enter the University ratings and otherdetails.
FR-3	Analyzing	● Analysis user credentials and compare withuniversities criteria.
FR-4	predicting	● Predicting the probability for getting admissions in the universitis by analysingvarious machine learning algorithms.

Non-functional Requirements:.

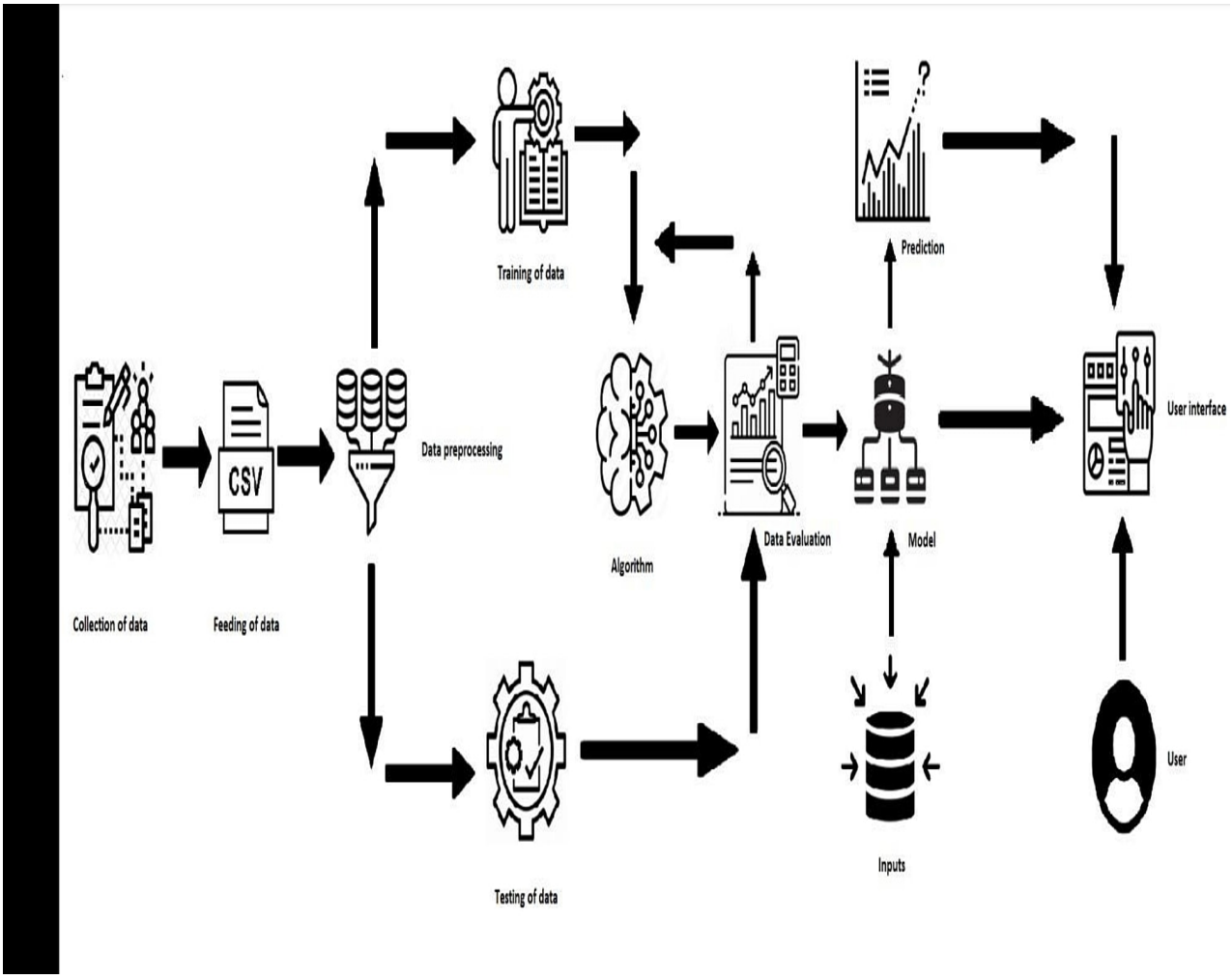
FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	● No training is required to use thewebsite. ● The form, home, about, FAQ andanalysis pages load up within 10 seconds. ● The results from the predictor shouldnot take morethan 30 seconds.
NFR-2	**Security**	● The system shall provide passwordprotected access to the website to allusers– students and admins.
NFR-3	**Reliability**	● The system shall be completely operational all hours of the day unless system failure or upgrade work is to be performed ● Down timeafter a failureshall not exceed24 hours .
NFR-4	**Performance**	● The mean time to view a web pageover a 56kbps modern connection shallnot exceed 5 seconds.
NFR-5	**Availability**	● Users willbe able to access the system predictor at any time, anyplace, as needed.
NFR-6	**Scalability**	● It can handle any amount of data and perform manycomputations in a cost effective and time-saving way.

PROJECT DESIGN

5.1 DATA FLOW DIAGRAMS:



5.2 SOLUTION AND TECHNICALARCHIETECTURE:



User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
customer	Login	USN-1	As a user, I can log into the application.	I can enter into the homepage	High	Sprint-1
	Input	USN-2	As a user, I can enter my marks, qualifications andother requirements.	I can enter my details/requirements	High	Sprint-2
		USN-3	As a user,I can choose the University Ratings	I can select the UniversityRatings	High	Sprint-3
	Output	USN-4	As a user ,I can see thechance of Eligibility	I can see the chance of Eligibility	High	Sprint-4
Customer Care Executive	Customer care	USN-5	As an executive, I can solvethe queries andissues.	I can give my support	Low	Sprint-4
Administrator	Application	USN-6	As an administrator, I can upgrade or update theapplication.	I can modify andimprovethe application	High	Sprint-4

PROJECT PLANNING & SCHEDULING:

6.1 SPRINT PLANNING & ESTIMATION:

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Index page	USN-1	As a user, I can log into the application .	1	High	Murali kumar,Ram Kumar,Sugash, Jeyaraman
Sprint-1	Data Collection	USN-2	Gathering the information fromvarious resources	1	Medium	Murali kumar,Ram Kumar,Sugash, Jeyaraman
Sprint-1	Data Preprocessing	USN-3	To Convert and cleanthe raw data	2	High	Murali kumar,Ram Kumar,Sugash, Jeyaraman
Sprint-2	Model Building	USN-4	Using cleaned dataset, Model can be build usingML Algorithm	2	High	Murali kumar,Ram Kumar
Sprint-2		USN-5	Training the classification model	1	High	Sugash, Jeyaraman
Sprint-3	Application Building	USN-6	Building Python code and run the application	1	Medium	Murali kumar,Ram Kumar,Sugash, Jeyaraman
Sprint-3		USN-7	Predicted Resulthas shown to the user	1	Medium	Murali kumar,Ram Kumar,Sugash, Jeyaraman
Sprint-4	Implementation oftheapplication and deployment on cloud	USN-8	Deployed on IBM Cloud	2	High	Murali kumar,Ram Kumar,Sugash, Jeyaraman

MILESTONE & ACTIVITYLIST:

- **PLANNING:** **Duration:**4 days
- We must plan all the modules which is necessary for our project.
- **REQUIREMENTS:** **Duration:**3 days
- We must decide what are the softwareand tools we need and installthe required process.
- **DESIGN:** **Duration:**6 days
- In our projectWe must design all the modules like login, registration, dashboard,academic details of the user, upload files.
- **DEVELOPMENT:** **Duration:**1 week
- We are going to develop the predictor which uses the previous dataset and academicdetails of the user. In this phase we will use some algorithms for prediction process.
- **TESTING:** **Duration:**3 day
- Before submitting the project, we must checkout all the modules whether it has erroror not.
- **DEPLOYMENT:** **Duration:**2 days
- After finishing all process of our projectthen we must submit our project in GitHub.

6.2 SPRINT DELIVERY SCHEDULE:

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

6.3 REPORTS FROM JIRA:

CODING & SOLUTIONING

7.1 FEATURE 1:

The new feature will predict the chances in the admission of the university. Thefeaturewas designed in the html code connected with app.py as the backend.

Source Code:

```
{% extends 'index.html' %}

{% block body %}

<div class="container text-center p-4">
   <div class="d-flex justify-content-center">

      <div class="card" style="width: 34rem;">
         <img src="..\static\img\chance.jpg" class="card-img-top" alt="...">
         <div class="card-body">
            <h5 class="card-title">You Have Chance</h5>
```

```
            <p>The model has predicted that you have <strong></strong> chance</p>

            <a href="/home" class="btn btn-primary">Go Back</a>
          </div>
        </div>
    </div>
</div>

{% endblock %}
```

7.1 FEATURE 2:

The new feature will predict the low chances in the admission of the university. The feature was designed in the html code connected with app.py as the backend.

Source Code:

```
{% extends 'index.html' %}
{% block body %}

<div class="container text-center p-4">
```

```
    <div class="d-flex justify-content-center">
      <div class="card" style="width: 34rem;">
        <img src="..\static\img\noChance.jpg" class="card-img-top" alt="...">
        <div class="card-body">
          <h5 class="card-title">You have a LOW / NO chance</h5>
          <p>The model has predicted that you have <strong></strong> no chance</p>

          <a href="/home" class="btn btn-primary">Go Back</a>
        </div>
      </div>
    </div>
</div>

{% endblock %}
```

TESTING

8.1 Test Cases:

8.2 User Acceptance Testing:

Purpose of Document:

The purpose of this document is to briefly explain the test coverage and open issues of the [Early detection of forest fire using Deep Learning] project at the time of the release to User Acceptance Testing (UAT).

Defect Analysis:

This reportshows the numberof 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	3	19
Duplicate	0	0	0	0	0
External	2	3	0	1	6
Fixed	11	2	4	20	37
Not Reproduced	0	0	0	0	0
Skipped	0	0	1	1	2
Won't Fix	0	0	0	0	0
Totals	24	14	13	26	64

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	51	0	0	51
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	9	0	0	9
Final ReportOutput	4	0	0	4
Version Control	2	0	0	2

RESULTS

9.1 PERFORMANCSEMETRICS:

Measure the performance using matrices

```
pd.crosstab(Y_Test,y_predict)
```

col_0	0	1	2
Sex			
0	108	28	112
1	33	223	36
2	123	52	121

```
print(classification_report(Y_Test,y_predict))
```

```
              precision    recall  f1-score   support

           0       0.41      0.43      0.42       249
           1       0.73      0.77      0.75       291
           2       0.45      0.41      0.43       296

    accuracy                           0.54       836
   macro avg       0.53      0.54      0.53       836
weighted avg       0.54      0.54      0.54       836
```

ADVANTAGES & DISADVANTAGES

Advantages

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

DisAdvantages

- Requiredactive internet connection.
- System will provide inaccurate results if data entered incorrectly.

CONCLUSION

This system ,being the first we have created in Python using ML algorithms and other front end languages such as html, css, java script , 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 theusability of the system made themselves apparent.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. The majority of features that are includedwork flawlessly and the errorsthat do exist are minoror graphical.

FUTURE SCOPE

The futurescope of this project is very broad. Few of them are:

This can be accessed anytime anywhere, since it is a web application provided onlyan internet connection.

The user had not need to travel a long distance for the admission and his/her timeis also saved as a result of this automated system.

This can be implemented in less time for proper admission process.

APPENDIX

SOURCE CODE:

Our project source code:
link:http://localhost:8888/notebooks/Desktop/New%20folder/Final%20Deliverables/university%20admit%20eligibility%20predictor.ipynb

Our Githublink : https://github.com/IBM-EPBL/IBM-Project-25257-1659956392

Demo video link: https://www.youtube.com/embed/c-FbbB7u2H4