UNIVERSITY ADMIT ELIGIBELITY PREDICTOR

TEAM ID: PNT2022TMID32417

Project Link: http://169.51.203.133:32375/home

1. INTRODUCTION

For many of the students, the university entrance predictor is extremely advantageous. By determining the cut off, it helps the students not only filling all the college admission forms but also previously help them in getting an idea whether they are eligible for this college or not.

1.1 Purpose

A persons education plays a vital role in their life. While planning for education students often have several questions regarding the courses, universities, job opportunities, expenses involved, etc. Securing admission in their dream university is one of their main concerns. It is seen that often students prefer to pursue their education from universities which have global recognition.

2. LITERATURE SURVEY

When it comes to international students the first choice of the majority of them is the United States of America. With the majority of worlds highly reputed universities, wide range of courses offered in every sector, highly accredited education system and teaching, scholarships provided to students, best job market and many more advantages make it the dream destination for the international 1 students. According to research, there are above 8 Million international students studying in more than 1700 public and 2500 private universities and colleges across the USA. (

2.1 Existing problem

Universities take into consideration different factors like score on aptitude based examination like the General Record Examination (GRE), command over the English language is judged based on their score in English competency test like Test Of English as a Foreign Language (TOEFL) OR International English Language Testing System (IELTS), their work experience in same or other fields, the quality of the Letters Of Recommendation (LOR) and the Statement Of Purpose documents provided by the student etc. Based on the overall profile of the student decision is taken by the universities admission team to admit or reject a particular candidate.

2.2 References

- 1. Geiser, Saul, and with Roger Studley. "UC and the SAT: Predictive validity and differentialimpact of the SAT I and SAT II at the University of California." *Educational Assessment* 8.1 (2002): 1-26.
- 2. Rothstein, Jesse M. "College performance predictions and the SAT." *Journal of Econometrics* 121.1-2 (2004): 297-317.
- 3. Leonard, David K., and Jiming Jiang. "Gender bias and the college predictions of the SATs: A cry of despair." *Research in Higher education* 40.4 (1999): 375-407.

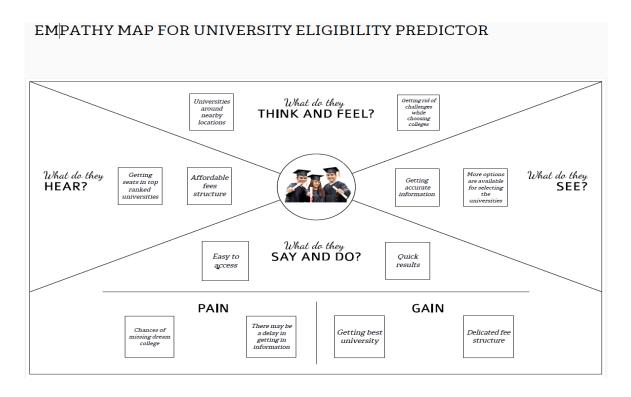
2.3 Problem Statement Definition

Our aim is to help the user to predict the university based on their eligibility and interest with delicate informationBuild an application that predicts the university admission chances of a student powered by machine learning models. Train the model and host it on IBM cloud. The majority of international students studying in the USA are from India and China. In the past decade, India has seen a huge increase in the number of students opting to pursue their education from foreign universities in countries like The USA, Ireland, Australia, Germany, etc. Although there are significant universities and colleges in India, students are finding it difficult to get admission in the highly ranked colleges and also getting a job is a challenge as the ratio of number students to the number work opportunities available is quite high. India is one of the leading counties in the number of software engineers produced each year; it becomes tough for the students to find jobs in elite companies due to high competition. This motivates a good number of students to pursue post-graduation in their field. It is seen that the number of students pursuing Masters in Computer Science field from universities in the USA is quite high; the focus of this research will be on these students.

3. IDEATION & PROPOSED SOLUTION

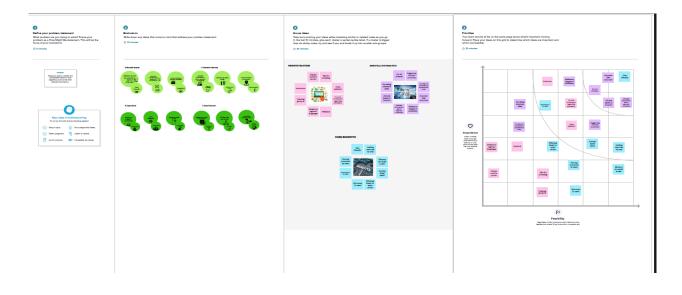
The project aims to develop an application that uses artificial intelligence with the help of chat bot to customize products for the customers which enhances the fame of ecommerce store and reduce the time which customers spends on choosing products. The application also uses IBM cloud storage for storing objects. User can get accurate information regarding universities according to their interest and eligibilityAn application that predicts the university admission chances of a student powered by machine learning models. Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. The primary objective of this research is to develop a system to solve the problems the international students are facing while applying for universities in the USA.

3.1 Empathy Map Canvas



3.2 Ideation & Brainstorming

This task of shortlisting the universities where the student has high chances of admission is difficult for mainly for the international students, so they end up with applying to many universities in hopes of getting admission in few of them thus investing an extra amount of money in the applications. There are several portals and websites which provide information and help to students in shortlisting the universities, but they are not reliable. Most of the students dont take the risk of evaluating the colleges by themselves, and they seek the help of the education consultancy firms to do it for them. Again for this students have to pay a huge amount of fee to the education consultant.



We will be creating a simple user interface which will help the users to input the data related to student profile and get the predicted result for the application based on the profile as output. This research will thus eventually help students saving the extra amount of time and money they have to spend at the education consultancy firms. And also it will help them to limit their number of application to a small number by proving them the suggestion of the universities where they have the best chance of securing admission thus saving more money on the application fee.

3.4 Problem Solution fit

We will be developing a University Admit Eligibility Predictor system which will help the students to predict the chances of their application being selected for a particular university for which they wish to apply based on their profile. Also, the system will provide a recommendation of universities to the student to which the student has a high possibility of getting admission. Multiple machine learning classification algorithms were evaluated to develop the system.

4. REQUIREMENT ANALYSIS

Requirements analysis, also called requirements engineering, is the process of determining user expectations for a new or modified product. These features, called requirements, must be quantifiable, relevant and detailed. In software engineering, such requirements are often called functional specifications. Requirements analysis is critical to the success or failure of a systems or software project. The requirements should be documented, actionable, measurable, testable, traceable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design

4.1 Functional requirement

- prediction
- percentage of chance
- eligibility

4.2 Non-Functional requirements

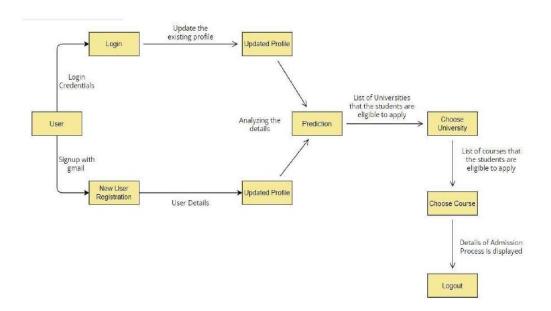
- Speed
- Security
- Portability
- Compatibility
- Capacity
- Reliability
- Environment

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5. PROJECT DESIGN

5.1 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 theright amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

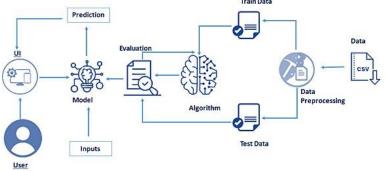


5.2 Solution & Technical Architecture

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

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software toproject stakeholders.
- Define features, development phases, and solution requirements.

Provide specifications according to which the solution is defined, managed, and delivered.



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5.3 User Stories

A user story is an informal, natural language description of features of a software system. They are written from the perspective of an end user or user of a system, and may be recorded on index cards, Postit notes, or digitally in project management software.[1] Depending on the project, user stories may be written by different stakeholders like client, user, manager, or development team. And every students think that it's a simple methodology to predict our eligibility

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority High	Team Members	
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirmingmy password	1 0		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 geta personalized dashboard	5	Low	All	
Sprint-2	View institutes	USN-4	As a user, I can view list of institutes	1 0	Low	All	
Sprint-3	prediction	USN-5	As a user, I can provide my scores for prediction	1 0	High	All	
Sprint-4	preferences	USN-6	As a user I can select and filter results based on my preferences	2 0	High	All	

6.2 Sprint Delivery Schedule

Project Tracker, Velocity & Burndown Chart: (4 Marks)

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

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)

Av=60 storypoints/24 days=2.5

6.3 Burndown chart:

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum.

However, burn down charts can be applied to any project containing measurable progress over time.

https://www.visual-paradigm.com/scrum/scrum-burndown-chart/

https://www.atlassian.com/agile/tutorials/burndown-charts

7.PROJECT CODE:

7.1 APP CODE

```
Tile Edit Selection View Go Run Terminal Help
              C: > Users > jebat > OneDrive > Desktop > pro > Final Deliverable 
                                        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))
                                                   'University Rating',
'SoP',
'LOR',
'CGPA',
'Research'],
                                                                 https://us-south.ml.cloud.ibm.com/ml/v4/deployments/8308fd4c-24a5-46ab-96fa-263657ae4ad0/predictions?version=2022-10-18',

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             🅏 арр.ру 🗙
                                                   response_scoring = requests.post(
    'https://us-south.ml.cloud.ibm.com/ml/v4/deployments/8388fd4c-24a5-46ab-96fa-263657ae4ad0/predictions?version=2022-10-18',
                                                             json=payload_scoring,
headers=header
                                                  result = response_scoring['predictions'][0]['values']
                                                             return redirect(url_for('chance', percent=result[0][0]*100))
                                                  return redirect(url_for("demo2"))
                               @app.route("/home")
def demo2():
    return render_template("demo2.html")
                                def chance(percent):
    return render_template("chance.html", content=[percent])
                               @app.route("/nochance/spercent>")
def no_chance(percent):
                                         return render_template("noChance.html", content=[percent])
                               @app.route('/<path:path>')
def catch_all():
                               if __name__ == "__main__":
app.run()
                                                                                                                                                                                                                                                                                                                                                                        Ln 1, Col 1 Spaces: 4 UTF-8 LF Python ✓ Prettier 🛱 🚨
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7.2 INDEX

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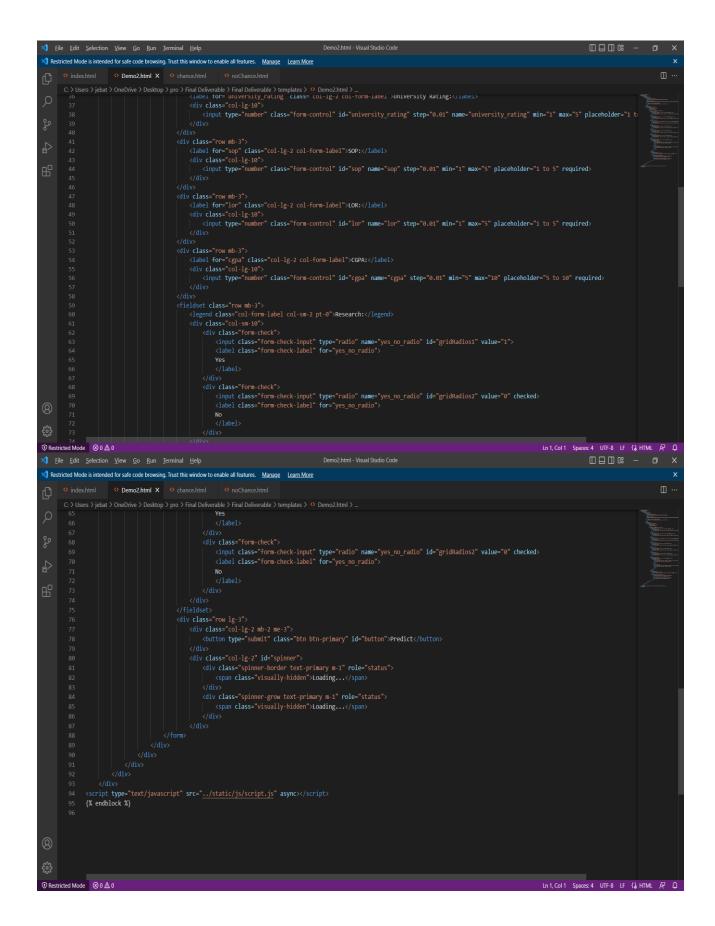
7.3 DEMO

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Demo2.html - Visual Studio Code
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    C > Users > jebat > OneDrive > Desktop > pro > Final Deliverable > Final Deliverable > templates > ◆ Demo2.html > ...

1 {% extends 'index.html' %}
          {% block body %}
<div class="p-4":
                Find the chances of your admission by filling the particulars

   Helps the students to predict whether they can get admission in the rated university based on their GRE, TOFEL scores and CGPA with delicate information
                       <input type="number" class="form-control" id="gre" name="gre" min="250" max="340" placeholder="250 to 340" required>

<
                                    <div class="col-lg-10">
  <input type="number" class="form-control" id="tofel" name="tofel" min="50" max="120" placeholder="50 to 120" required>
                                 Ln 1, Col 1 Spaces: 4 UTF-8 LF ( } HTML № Д
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```



7.4 CHANCE

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| Be | Eds | Selection | Your & Go | Ban | Immunol | Este | Processor | Immunol | Este | Processor | Immunol | Este | Processor | Immunol | Este | Immunol | Immunol
```

7.5 NO CHANCE

7.6 STYLES CODE:

```
★ File Edit Selection View Go Run Terminal Help
                                                                                                                                                                                                                                                             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);

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         # styles.css X
                          margin: 0;
padding: 0;
border: 0;
                   body {
    font: 62.5%/1.5 "Lucida Grande", "Lucida Sans", Tahoma, Verdana, sans-serif;
    background: ■#FBEAEB;
    background: -webkit-linear-gradient(to right, ■#FBEAEB, □ #2F3C7E);
    background: linear-gradient(to right, ■#FBEAEB, □ #2F3C7E);
}
                          color: □#000000;
text-align:center;
                      padding: 3px;
border: 1px solid ■#999999;
                   img {
    max-width: auto;
                                                                                                                                                                                                                                          Ln 1, Col 1 Spaces: 4 UTF-8 LF (3 CSS № Д

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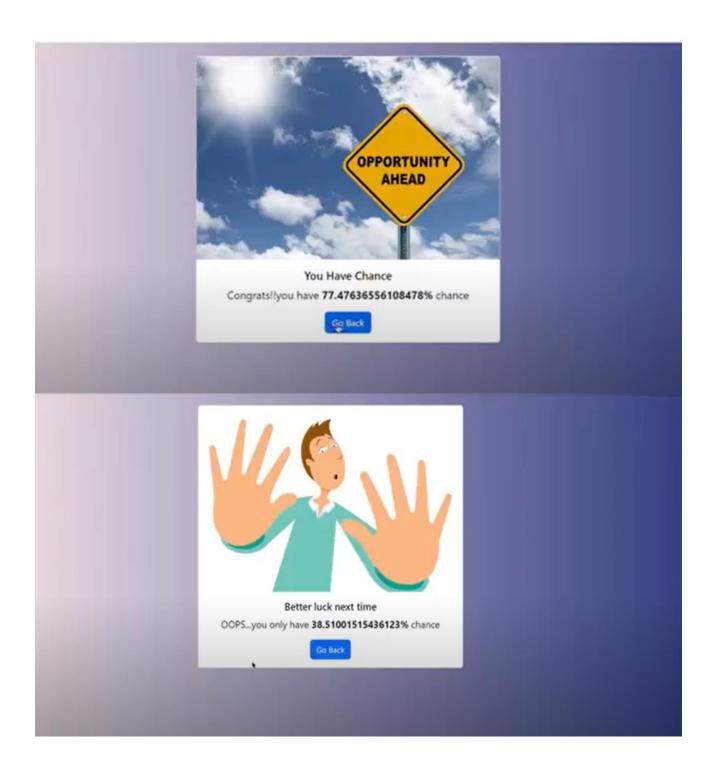
1 Serial N	lo. (GRE Score	TOEFL Score	University Rating	SOP	LOR	CGPA	Research	Chance of Admit
		337					9.65		0.92
		324					8.87		0.76
		316	104						
		322	110				8.67		0.8
		314					8.21		0.65
		330					9.34		0.9
		321	109						
		308							0.68
		302							
		323	108				8.6		0.45
		325	106				8.4		0.52
		327							0.84
		328							0.78
		307	109						0.62
		311	104				8.2		0.61
		314							0.54
		317							0.66
		319	106						0.65
		318					8.8		0.63
		303							0.62
		312							0.64
		325					8.4		
		328							0.94
		334							0.95
		336					9.8		0.97
		340							0.94
		322	109	5	4.5	3.5	8.8	0	0.76

9 .User Acceptance Testing

User Acceptance Testing (UAT) is a type of testing performed by the end user or the client to verify/accept the software system before moving the software application to the production environment. UAT is done in the final phase of testing after functional, integration and system testing is done.

The User Acceptance of this product is not surveyed enough to give a solid conclusion. The theretical and hypothetical acceptance is calculated to be high enough to conclude that this product is usable and valuable.

10.RESULTS



10 ADVANTAGES & DISADVANTAGES

> ADVANTAGE

- 1. Know the percentage 2.Lower investigation 3.Provide Relevant Material
- 4. Reduce time consumption
- 5. Good user experience

> DISADVANTAGE

- 1. Significiant investments required
- 2.Unable to capture changes 3.Privacy concerns

11 CONCLUSION

We have successfully developed an application using python flask, HTML, CSS. By using the application we can predict weather we can get admission in the desired University or not. The system successfully predicted the college eligibility using data science.

12 FUTURE SCOPE

In future we would like to enhance the existing model in such a way that consumer feels the same way when purchasing in store using Virtual reality and other upcoming technologies Research to improve the accuracy of the system is under progress.

13 APPENDIX Source Code GitHub & Project Demo Link

Project Link: http://169.51.203.133:32375/home

github: https://github.com/IBM-EPBL/IBM-Project-9453-1659008282

Demo:

 $https://drive.google.com/file/d/12qVClELriWb9_GH_6yYlHTGYdXoyYjDo/view?usp=drivesdk$

