INTELLIGENT ADMISSIONS: THE FUTURE OF UNIVERSITY DECISION MAKING WITH MACHINE LEARNING

Submitted in partial fulfillment of requirement for the award of the Degree

Bachelor of Computer Science

In the faculty of Computer Science of Bharathiar University, Coimbatore

Submitted by

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L.R.G GOVERNMENT ARTS COLLEGE FOR WOMEN

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(Affiliated To Bharathiar University)

TIRUPUR-4

APRIL-2023

LRG GOVERNMENT ARTS COLLEGE FOR WOMEN

NAAN MUDHALVAN PROJECT WORK

(AFFILIATED TO BHARATHIAR UNIVERSITY)

TIRUPUR-641602

TITLE : Intelligent Admissions: The Future Of University Decision Making With Machine Learning

This is to certify that this is a bonafide record of work done by the above students of III B.Sc (CS) Degree **NAAN MUDHALVAN PROJECT** during the year 2022-2023

Submitted for the Naan Mudhalvan project work held on April 2023

CLASS MENTOR **HEAD OF DEPARTMENT**

TABLE OF THE CONTENT

1.INTRODUCTION

1.1 OVERVIEW

University admission is the process by which students are selected to attend a college or university. The process typically involves several steps, including submitting an application,taking entrance exams, and participatingin interviews orotherevaluations.

Students are often worried about their chances of admissionin University .The universityadmission process for students can be demanding, but by being well-informed, prepared, and organized, students can increase their chances of being admitted to the universityof their choice.

The aim of this project is to help students in short listing universities with their profiles. Machine learning algorithms are then used to train a model on this data, which can be used to predict thechances of future applicants being admitted. With this project, students can make more informeddecisions about which universities to apply to, and universities can make more efficient use oftheir resources by focusing on the most promising applicants.The predicted output gives them afair idea about their admission chances in a particular university. This analysis should also helpstudentswho are currently preparing or will bepreparing to get abetter idea

1.2 PURPOSE

This article was an early beta test. See all-new collaborative articles about MachineLearningto get expert insights and join the conversation. Machine learning has become an increasingly popular tool in recent years,given its abilityto automatically detect patterns in data and make predictions about future events. This can beextremely useful for making decisions in a wide ra of domains,from financial trading to medical diagnoses. Here are some ways in which machine learning can be used to improve decision making

1.Providing better information

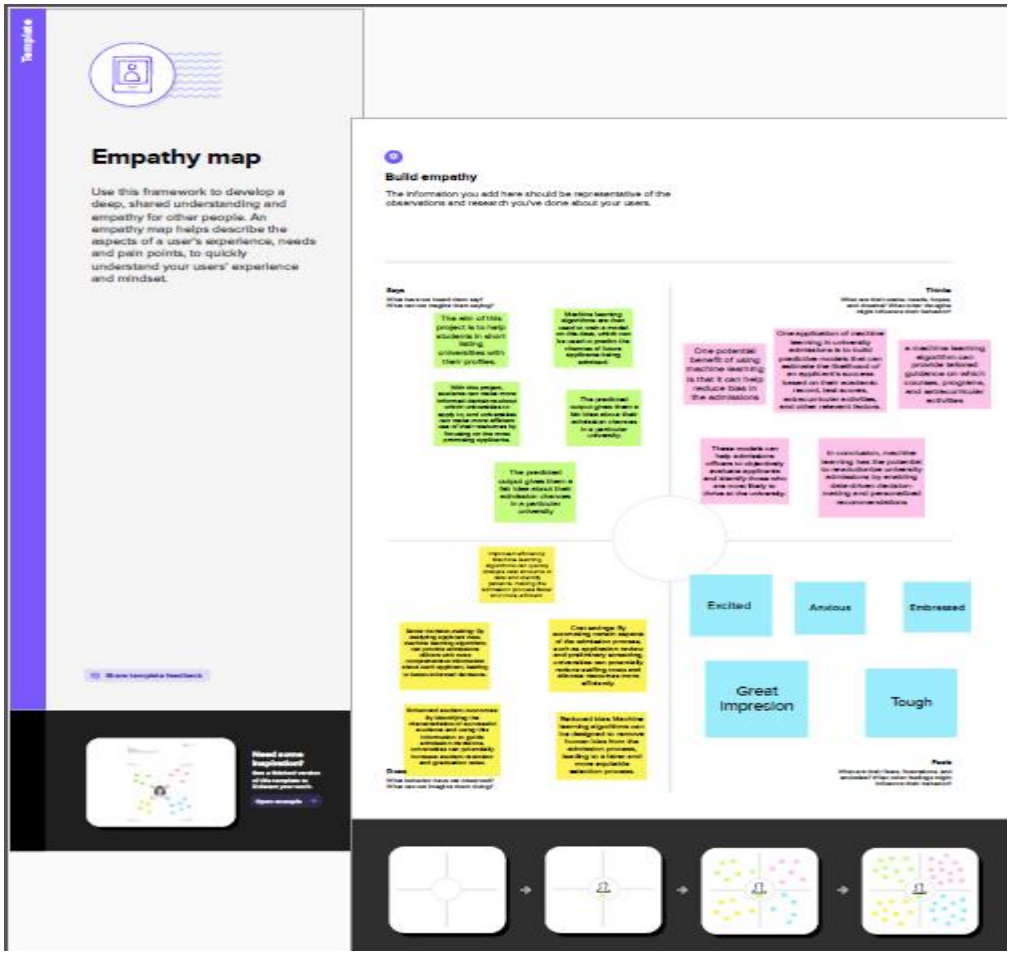
2.Automation the process

3.Improving tha accuracy

2. PROBLEM DEFINITION&DESIGN THINKING

2.1 EMPATHY MAP

An empathy map is a collaborative visualization used to articulate what we know about a particular type of user. It externalizes knowledge about users in order to 1) create a shared understanding of user needs, and 2) aid in decision making.



2.2 IDEATION AND BRAINSTROMING

Admissions prediction by using the brainstorm and ideation here are the some of the ideas

1.Collect and process the data

2.Feature selection

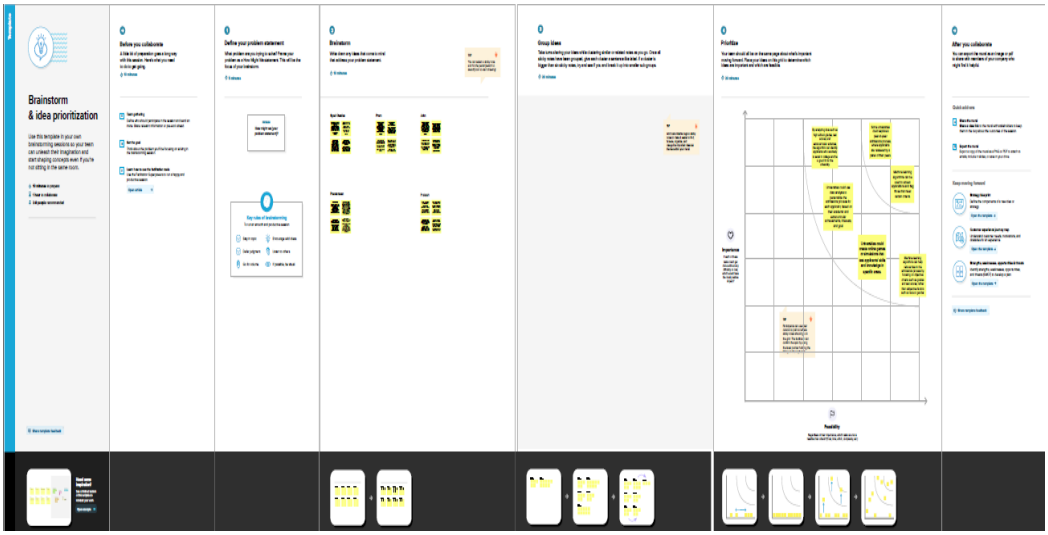
3.Algorithm selection

4.Model training

5.Model evalution

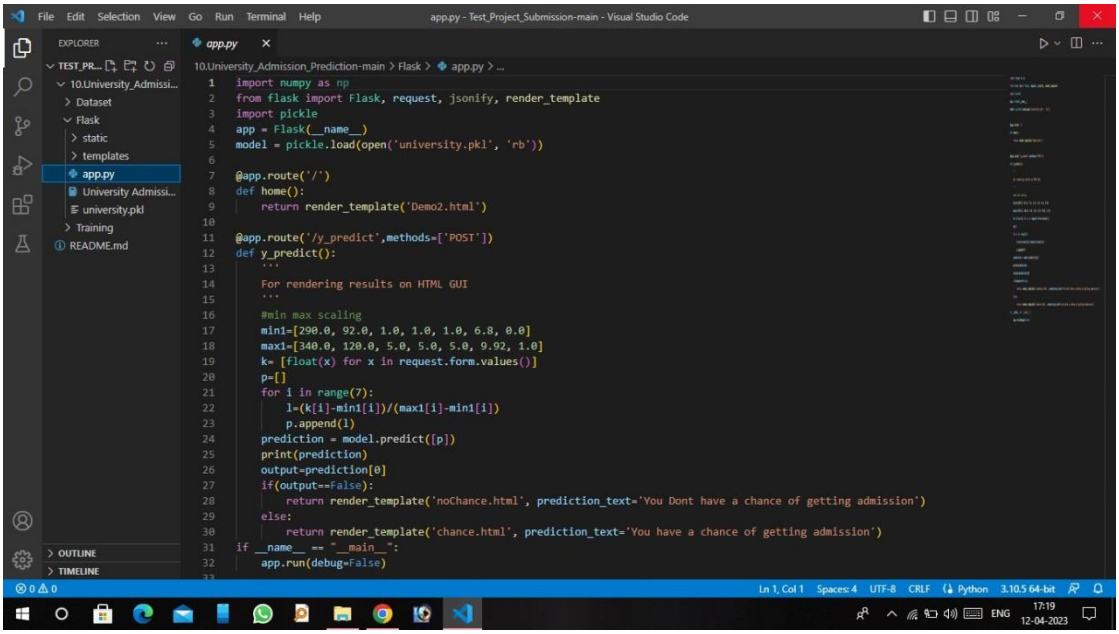
6.Deployment

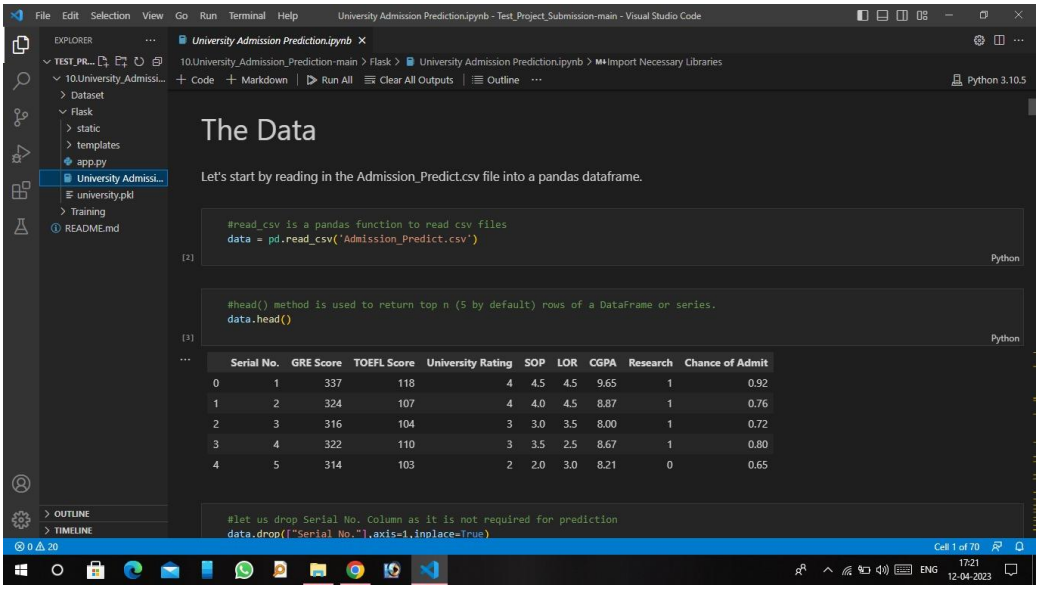
7.Continous improvement



RESULT

SAMPLE CODING


File Edit Selection View Go Run Terminal Help
app.py - Test_Project_Submission-main - Visual Studio Code
EXPLORER
app.py
10.University_Admission_Prediction-main > Flask > app.py > ...
TEST_PR...
10.University_Admissi...
Dataset
Flask
static
templates
app.py
University Admissi...
university.pkl
Training
README.md
OUTLINE
TIMELINE
1 import numpy as np
2 from flask import Flask, request, jsonify, render_template
3 import pickle
4 app = Flask(__name__)
5 model = pickle.load(open('university.pkl', 'rb'))
6
7 @app.route('/')
8 def home():
9 return render_template('Demo2.html')
10
11 @app.route('/y_predict',methods=['POST'])
12 def y_predict():
13 '''
14 For rendering results on HTML GUI
15 '''
16 #min max scaling
17 min1=[290.0, 92.0, 1.0, 1.0, 1.0, 6.8, 0.0]
18 max1=[340.0, 120.0, 5.0, 5.0, 5.0, 9.92, 1.0]
19 k= [float(x) for x in request.form.values()]
20 p=[]
21 for i in range(7):
22 l=(k[i]-min1[i])/(max1[i]-min1[i])
23 p.append(l)
24 prediction = model.predict([p])
25 print(prediction)
26 output=prediction[0]
27 if(output==False):
28 return render_template('noChance.html', prediction_text='You Dont have a chance of getting admission')
29 else:
30 return render_template('chance.html', prediction_text='You have a chance of getting admission')
31 if __name__ == "__main__":
32 app.run(debug=False)
Ln 1, Col 1 Spaces: 4 UTF-8 CRLF Python 3.10.5 64-bit
ENG 17:19 12-04-2023


File Edit Selection View Go Run Terminal Help
University Admission Prediction.ipynb - Test_Project_Submission-main - Visual Studio Code
University Admission Prediction.ipynb
10.University_Admission_Prediction-main > Flask > University Admission Prediction.ipynb > Import Necessary Libraries
Code Markdown Run All Clear All Outputs Outline
Python 3.10.5
The Data
Let's start by reading in the Admission_Predict.csv file into a pandas dataframe.
#read_csv is a pandas function to read csv files
data = pd.read_csv('Admission_Predict.csv')
[2]
Python
#head() method is used to return top n (5 by default) rows of a DataFrame or series.
data.head()
[3]
Python
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
#let us drop Serial No. Column as it is not required for prediction
data.drop(["Serial No."],axis=1,inplace=True)
Cell 1 of 70
ENG 17:21 12-04-2023

ADVANTAGES

Applicants' Convenience – One of the greatest advantages of the online application system is that applicants can choose to submit their applications at their convenience. All that is required is access to a computer and internet connectivity.

Logistics – No more running out of paper application forms, picking the right colour ink pens, illegible prints and wondering if the application has been received at all. The online application process offers university applicants a uniform platform for filling in their applications and also provides prompts on which fields are mandatory.

Increases Accuracy and Efficiency – Those who have seen university officials accepting thousands of paper applications each day at office counters understand that high fatigue and monotony involved in the paperwork is a catalyst for errors

Demolishing Geography – Another great advantage of the online admission system is that it makes it possible for candidates from across the country and even abroad to apply to Indian universities without any hassles.

APLLICATIONS

An application in a software program which enables you to perform a range of useful tasks. Examples ofapplications are word processing programs, spreadsheet software, databases or graphics packages

Application areas are deployment-oriented categories that focus on commonly deployed ITS services or systems. Application areas provide a starting point for identifying the ITS standards and other resources (e.g., case studies, lessons learned) that may be relevant to a specific type of deployment.

Application software is usually distinguished into two main classes: closed source vs open source softwareapplications, and free or proprietary software applications.

Software is a set of instructions, data or programs used to operate computers and execute specific tasks. It isthe opposite of hardware, which describes the physical aspects of a computer.

Application-level analysis is about analyzing the data transmitted by an application as the application wouldhave interpreted it. This is a resource-intensive type of analysis in several regards.

Application Unit means, in respect of a Listed Class, such number of Units of a Listed Class or whole multiples thereof as specified in this Prospectus or such other number of Units of a Listed Class determinedby the Manager, approved by the Trustee and notified to the Participating Dealers.

DISADVANTAGES

- **Computer Literacy and Internet Access** – In India, though Internet penetration is rather high, Internet connectivity and speed issues are major impediments to bring any real advantage to university applicants. Most rural areas experience high blackouts and electricity issues. This means, once again candidates in urban districts and areas are placed at a significant advantage.
- **Low Computer Literacy** – Another major concern is the low rate of computer literacy in India. Current estimates say that only about 6.5 percent Indians are computer savvy. A sudden shift to the online admission process is likely to cause confusion and despondency among a great many applicants.
- **Security Concerns** – In a country like India where security fails of online systems have become increasingly common over the years, online applications make it easier for systems to be breached and for applications or scores to be manipulated. The fear that hackers may target universities and educational institutions is a grave one.
- **Authenticity** – In most manual admission processes, the eligibility of candidates is proved by verification of originals at the time of accepting applications, ensuring that only genuine candidates apply. Online applications make it easier for fraudsters to manipulate the application process and eligibility requirements.

- **Infrastructural Requirements** – Building a robust and secure online admission process is a task that requires financial and infrastructural resources. Many universities and educational institutions.

CONCLUSION

The concluction of this project is to help students in short listing universities with their profiles.

Machine learning algorithms are then used to train a model on this data, which can be used to predict the chances offuture applicants being admitted.

With this project, students canmake more informed decisions about which universities to apply to, and universities can make more efficient use of their resources by focusing on the most promising applicants

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FUTURE SCOPE

The future scope of Machine Learning will take this digital world to a new era of automation. In this blog,we will see the Machine Learning future scope.

The scope of Artificial Intelligence is limited to domestic and commercial purposes as the medical and aviation sectors are also using AI to improve their services. If AI is outperforming human efforts, then opting for AI automation will reduce costs in the long run for a business.

Various benefits of AI lead to various use cases and job roles in the market, which are beneficial for deeptech enthusiasts or freshers looking to build their careers in the AI industry. The scope of AI is bright in India as firms need expert employees who can extract meaningful information from large chunks

APPENDICES

Intelligent Admissions : The Future Of University

VIDEO LINK ABOUT THIS PROJECT

https://youtu.be/CCCfMlfgoJE