



GOVERNMENT OF TAMILNADU

Naan Muthalvan - Project-Based Experiential Learning

THE FUTURE OF UNIVERSITY DECISION MAKING WITH MACHINE LEARNING

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BONAFIDE CERTIFICATE

This is to certify that this is a bonafide record of the project entitled **THE FUTURE OF UNIVERSITY DECISION MAKING WITH MACHINE LEARNING** By **MS.M.JANANI-(20626ER046), MS.L.NIVETHA-(20626ER055),MS. K.PAVATHARANI - (20626ER056), MS. G. PAVITHRA- (20626ER057)** This is submitted in partial fulfillment for the award of the degree of **Bachelor of Science in Computer Science in GOVERNMENT ARTS COLLEGE FOR WOMEN, NILAKOTTAI** during the period of December 2022 to April 2023.

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INTERNAL EXAMINER

EXTERNAL EXAMINER

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THE FUTURE OF UNIVERSITY DECISION MAKING WITH MACHINE LEARNING

1.INTRODUCTION

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 participating in interviews or other evaluations. Students are often worried about their chances of admission in University. the university admission process for students can be demanding, but by being well-informed, prepared, and organized, students can increase their chances of being admitted to the university of 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 the chances of future applicants being admitted. students can make 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. 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.

1.1 OVERVIEW

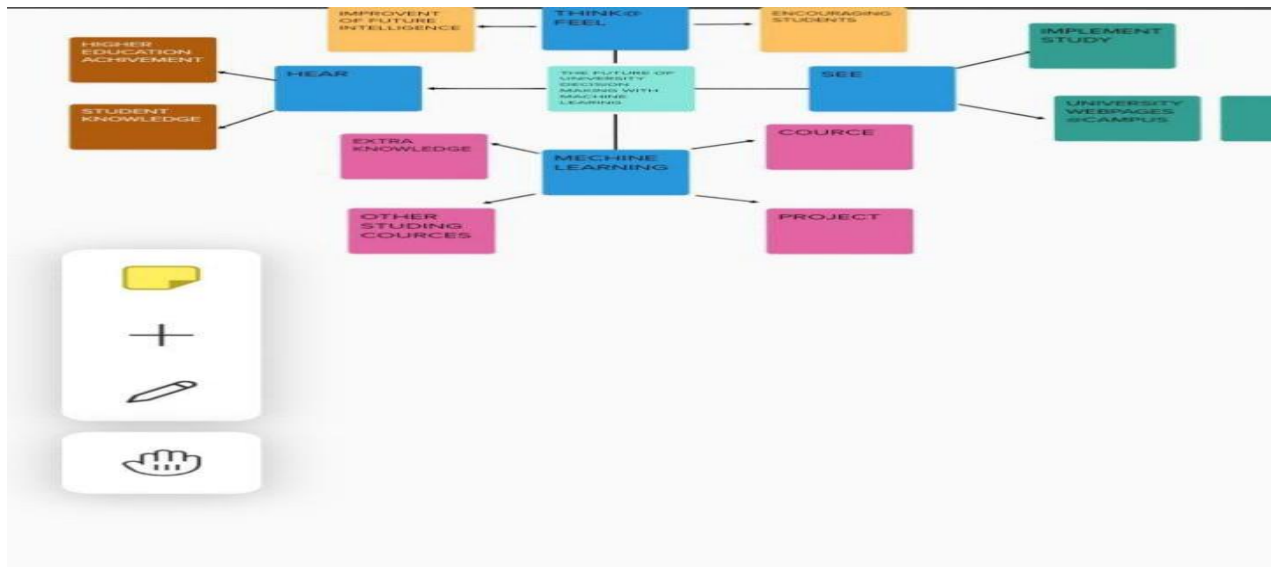
Decision-making skills for students can help the student to provide an insight on their personality as it throws light on their strengths and weaknesses. Thus it can allow the students to focus on their weaknesses so that they can improve them. Decision-making is a region of intense study in the fields of systems neuroscience, and cognitive neuroscience. Several brain structures, including the anterior cingulate cortex (ACC), orbitofrontal cortex, and the overlapping ventromedial prefrontal cortex are believed to be involved in decision-making processes.

1.2 PURPOSE

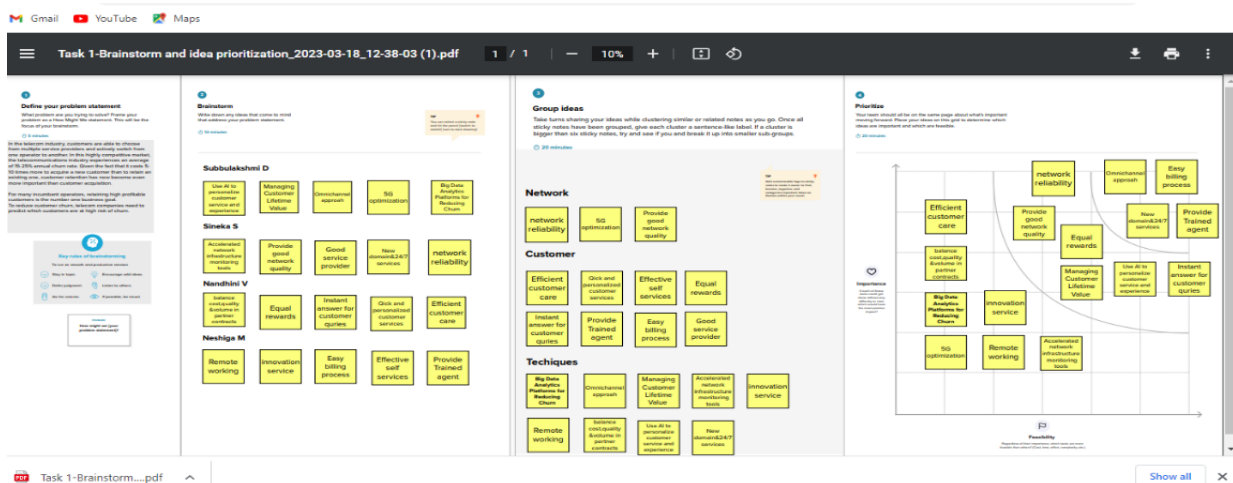
The importance of decision making lies in the way it helps you in choosing between various options. Before making a decision, there is a need to gather all available information and to weigh its pros and cons. It is crucial to focus on steps that can help in taking the right decisions.

The importance of decision making in management is immense, as the business policy and strategies adopted ultimately affects the company's output and performance. Decision making is the coherent and rational process of identifying a set of feasible alternatives and choosing a course of action from them.

2.1 Empathy map



2.2 Ideation & Brainstorming Map



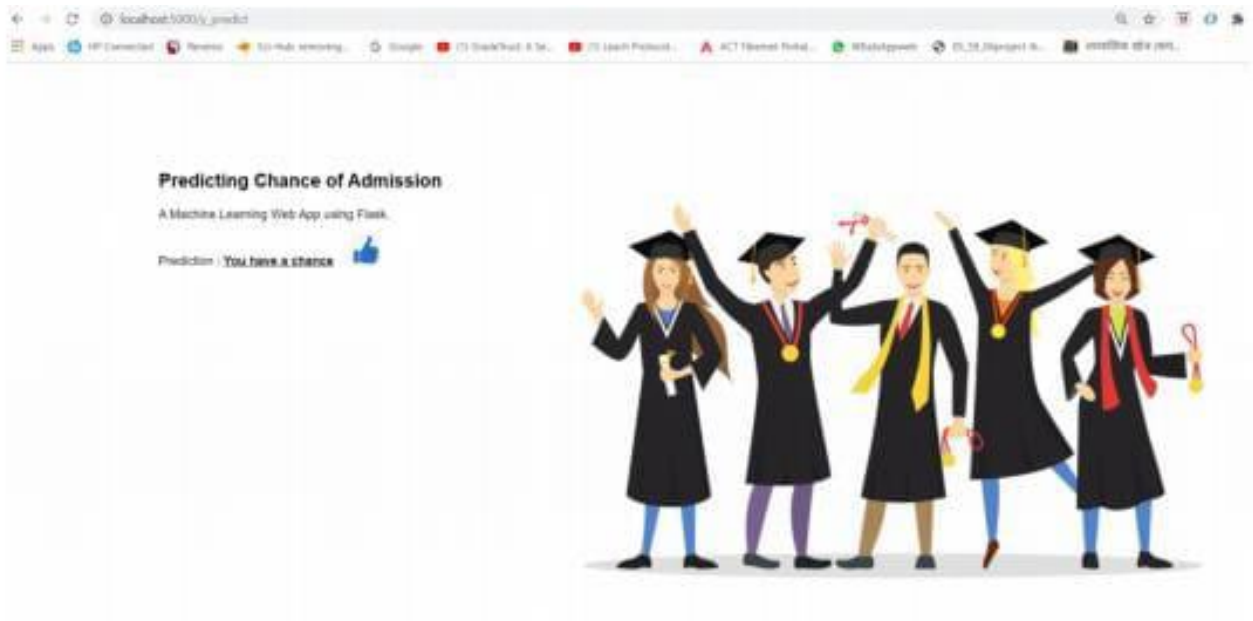
3. RESULT



The screenshot shows a web browser window with the URL `localhost:5000`. The page title is "UNIVERSITY ADMISSION PREDICTION SYSTEM". Below the title, it says "Enter your details and get probability of your admission". The form includes the following fields and options:

- Enter GRE Score:
- Enter TOEFL Score:
- Select University no:
 - ☐ 1
 - ☒ 2
 - ☐ 3
 - ☐ 4
 - ☐ 5
- Enter SOP:
- Enter LOR:
- Enter CGPA:
- Research:
 - ☐ Research
 - ☒ NO Research
-

The background of the form features a stack of books with a graduation cap and a rolled-up diploma tied with a red ribbon.



4.ADVANTAGES & DISADVANTAGES

ADVANTAGES

- **Good decisions can save you time, money and stress. Bad decisions can have life-changing consequences. Don't let this happen to you. We face decisions every day of our lives.**
- **Some of the Benefits of Decision-making skills that you must have include problem-solving, creativity, time management, teamwork, intuition, leadership, reasoning, analytical thinking, and emotional intelligence.**
- **Provide Complete Information. Generate More Alternatives. Increased Acceptance of A Solution. Increase Legitimacy.**

DISADVANTAGES

- **Time Consuming. Minority Domination. Pressures To Conform. Ambiguous Responsibility.**
- **The Group discussion making techniques often consume and take more time to come to a conclusion which is accepted by each individual in the group as every individual in the group has their own unique and innovative ideas which result in having too many options in consideration.**
- **The social pressure of the group can affect the individual's mindset as they may be very strong which can affect and change certain traits and qualities of the individual, in turn, changing his behavior entirely which affects the decision.**

5.APPLICATION

It takes hard work to guarantee your college application stands out. Make it rise to the top of the pile by becoming familiar with the application process and getting organized. A lot of moving parts go into applying to college— tests, essays, recommendation letters, transcripts—and each element has a deadline attached. Make careful note of deadlines for each school you're applying to so you don't miss them.

6.CONCLUSION

Conclusion. When it comes to making decisions, one should always weigh the positive and negative business consequences and should favour the positive outcomes. This avoids the possible losses to the organization and keeps the company running with a sustained growth. During rational decision making, individuals will survey alternatives, evaluate consequences from each alternative, and finally do what they believe has the best consequences for themselves. The keys to a decision are the quality of information about alternatives and individual preferences.

7.FUTURE SCOPE

Purpose Using narratives from leading international academics and commentators, the authors chart four, possible, “universities of the future” models and discuss how current university management issues can enable or hinder them.

The changing world of academia is a subject of growing interest: for those within; for organisations funding learning and for economies relying on knowledge creation as a key differentiator. External pressures to change, to become more commercial, entrepreneurial, regionally-anchored yet globally impactful, are stressing current university models.

Using contemporary narratives from leading international academics and commentators, we have developed four models of ‘universities of the future’ and in this short, theoretical thought-piece we explore how current university management practices might enable or hamper progression to becoming universities of the future.

8. APPENDIX

A. Source code

```
import numpy as np

import pandas as pd

import matplotlib as plt

im port seaborn as sns

%matplotlib inline


data = pd.read_csv('Admission_Predict.csv')


data.info()


data.isnull().any()


data.data.rename(columns = {'Change of Admit ':'Change of Admit'})


data.describe()


sns.pairplot(data=data,hue='Research',markers=["^","v"],palette='inferno')


sns.scatterplot(x='University Rating',y='CGPA',data=data,color='Red',s=100)


category = [GRE Score','TOEFL Score','University
Rating','SOP','LOR','Research','Change of Admit']


color=['yellowgreen','gold','lightblue','pink','red','purple','orange','gray']


start = True
```

```

for i in np.arange(4):

    fig = plt.figure(figsize=(14,8))

    plt.subplot2grid((4,2),(i,0))

    data[category[2*i]].hist(color=color[2*i],bins=10)

    plt.title(category[2*i])

    plt.subplot2grid((4,2),(i,1))

    data[category[2*i+1]].hist(color=color[2*i+1],bins=10)

    plt.title(category[2*i+1])

plt.subplots_adjust(hspace = 0.7, wspace = 0.2)

plt.show()

```

```

from sklearn.preprocessing import minmaxscaler

```

```

sc = minmaxscaler()

```

```

x=sc.fit_transform(x)

```

```

x

```

```

x=data.iloc[:,0:7].values

```

```

x

```

```

y=data.iloc[:,7:].values

```

```

y

```

```

from sklearn.model_selection import train_test_split

```

```

x_train, x_test, y_train, y_test = train_test_split(x,y, test_size=0.30,random_state=101)

```

```

y_train=(y_train>0.5)

```

y_train

y_test=(y_test>0.5)

from sklearn.linear_model.logisticRegression

cls =LogisticRegression(random_state =0)

lr=cls.fit(x_train, y_train)

y_pred =lr.predict(x_test)

y_pred

from sklearn.metrics import accuracy_score,recall,roc_auc_score,confusion_matrix

print("\nAccuracy score: %f" %(accuracy_score(y_test,y_pred) * 100))

print("Recall score : %f" (recall_score(y_test,y_pred) * 100))

print("ROC score : %f\n" %(roc_auc_score(y_test,y_pred) * 100))

print(confusion_matrix(y_test,y_pred))

import numpy as np

from flask import Flask, request, jsonify, render_template

import pickle

app = Flask(__name__)

```
from tensorflow.keras.models import load_model
```

```
model = load_model('model.h5')
```

```
@app.route('/')
```

```
def home():
```

```
    return render_template('Demo2.html')
```

```
@app.route('/')
```

```
def home():
```

```
    return render_template('Demo2.html')
```

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

```
def y_predict():
```

```
    For rendering results on HTML GUI
```

```
    '''
```

```
min=[290.0, 92.0, 1.0, 1.0, 1.0, 6.8, 0.0]
```

```
max1=[340.0, 120.0, 5.0, 5.0, 5.0, 9.92, 1.0]
```

```
    k = [float(x) for i in request.from.values()]
```

```
    p=[]
```

```
for i in range(70:
```

```
l=(k[i]-min1[i])/(max1[i]-min1[i])
```

```
    p.append(1)
```

```
prediction = model.predict([p])
```

```
print(prediction)
```

```
    output=prediction[0]
```

```
if(output==False):
```

```
    return render_template('noChance.html', prediction_test='You Dont have a chance of  
    getting
```

```
    else:
```

```
    return render_template('Chance.html', prediction_test='You Dont have a chance of  
    getting admis
```

```
if __name__ == "__main__":
```

```
    app.run(debug=False)
```

