



STUDENT PLACEMENT PREDICTION

MINI PROJECT REVIEW

PROJECT GUIDE:

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INTRODUCTION:

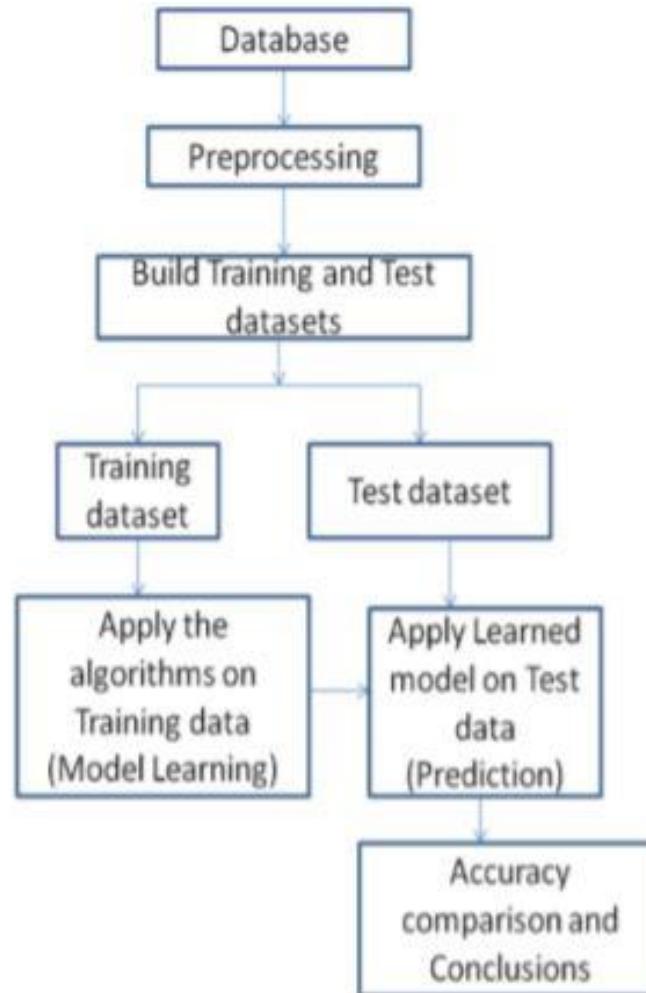
- One of the largest challenges that higher learning establishments face nowadays is to boost the placement performance of scholars.
- The placement prediction is additional complicated once the quality of instructional entities increases.
- One of the effective ways to address the challenges for improving the quality is to provide new knowledge related to the educational processes and entities to the managerial system.



- With the machine learning techniques, the information is often extracted from operational and historical knowledge that resides at intervals the academic organization's databases exploitation. The information set for system implementation contains data regarding past data of scholars.
- PLACEMENT PREDICTION is a system that replaces the current methodology of hiring fresher and eliminating unnecessary rounds and incapable applicants..



ARCHITECTURE:





EXISTING SYSTEM:

- The current system generally uses only a single parameter to judge whether a student can be placed or not during the campus placements that is academic performances .
- while calculating the probability of a student getting selected, sometimes interpret the result having a probability of more than 100% which is not feasible and denotes a wrong interpretation to the student.
- Thus,cracking an interview not only depends on the academic scores but also the awareness of student during the aptitude test and interviews.

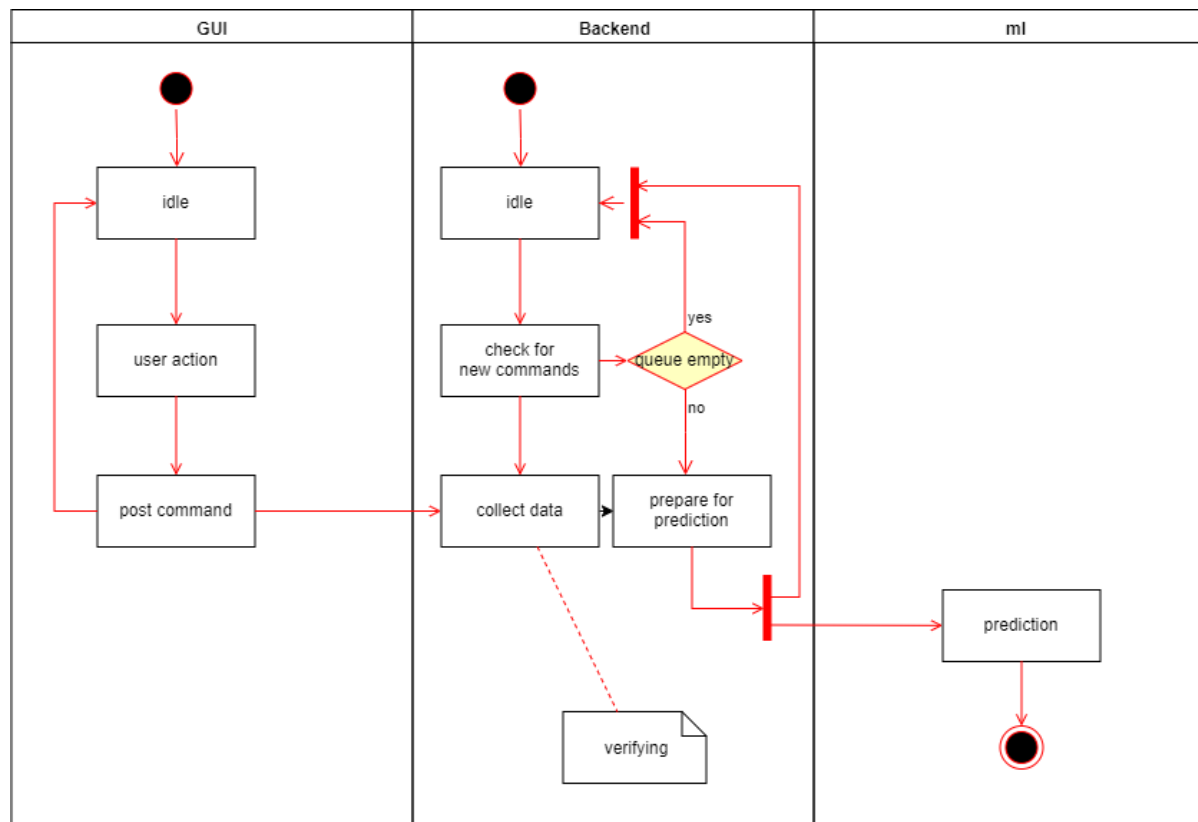


PROPOSED SYSTEM:

- Proposed system follows the Decision Tree model of classification, which removes the problems caused by previous algorithms like negative prediction and over-value prediction. (more than 100% prediction value).
- Here we use Decision machine learning module to provide efficient and accurate results and we also provide a nice Graphical User Interface by Tkinter for easy interaction with the model.



UML DIAGRAM:





ALGORITHM:

- For predicting a value based on history of data, it is necessary to train the prediction model. In our case, we chose Decision tree as a predictor system so we shall be training classification model.
- ☐ Data gathering
- ☐ Pre-processing
- ☐ Feature Selection
- ☐ Training different model
- ☐ Model selection
- ☐ Prediction



PROCESS:

- First we need to download and import necessary packages like Tkinter and required ML algorithms.

```
Anaconda Prompt

(base) C:\Users\Dheeraj>pip install decisiontree
Collecting decisiontree
  Downloading https://files.pythonhosted.org/packages/a1/22/fabc080239e5ecc3ca9370c9dc417360515f03eb31f3c44c4071bcfacd3f/DecisionTree-3.4.3.tar.gz (335kB)
    100% |#####| 337kB 2.6MB/s
Building wheels for collected packages: decisiontree
  Building wheel for decisiontree (setup.py) ... done
  Stored in directory: C:\Users\Dheeraj\AppData\Local\pip\Cache\wheels\21\09\e9\68c27e0e068876a486ea2ac3096fee0a0e2f7a6428a45c276f
Successfully built decisiontree
Installing collected packages: decisiontree
Successfully installed decisiontree-3.4.3

(base) C:\Users\Dheeraj>
```



- Then the dataset is being loaded and forming our model by removing unnecessary columns which are not required.

```
Spyder (Python 3.7)
File Edit Search Source Run Debug Consoles Projects Tools View Help

Editor - C:\Users\Dheeraj\Desktop\student placement prediction\train.py
main.py x train.py x backend.py x temp.py x

1 from joblib import dump, load
2 import pandas as pd
3 from sklearn.tree import DecisionTreeClassifier
4
5 data = pd.read_csv("dataset.csv")
6 # print(data.keys())
7 clf = DecisionTreeClassifier()
8 clf.fit(data.drop(columns = ["Name ", "Roll number", "placement"]), data["placement"])
9 dump(clf, "model.ml")
10
11
```



- By connecting the backend code to the main one and to form a Tkinter window so that it will be easy interaction for the model.

Spyder (Python 3.7)

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Editor - C:\Users\Dheeraj\Desktop\student placement prediction\backend.py

main.py train.py backend.py temp.py

```
1 from joblib import dump, load
2
3 def predict(x,y,z,k):
4     model = load("model.ml")
5     return model.predict([[x,y,z,k]])[0]
6
7
```




OUTPUT:

- This is the output window through which we can make predictions.

Placement Prediction

Placement Prediction of Students



Name	<input type="text"/>	Technical Skills	<input type="text" value="None"/>
Roll no	<input type="text"/>	Communication Skills	<input type="text" value="None"/>
Aggregate	<input type="text"/> %	Backlogs	<input type="text"/>


Predict



- users will have to enter their details which are required to fill to know whether they will get placed or not.

Placement Prediction

Placement Prediction of Students



Name	<input type="text" value="K.Dheeraj"/>	Technical Skills	<input type="text" value="5"/>
Roll no	<input type="text" value="16891A0530"/>	Communication Skills	<input type="text" value="6"/>
Aggregate	<input type="text" value="68"/> %	Backlogs	<input type="text"/>

please fill every field


Predict



- we can see that even if the student has low CGPA and contains more backlogs , he has a chance of getting placed .

Placement Prediction

Placement Prediction of Students



Name	<input type="text" value="G.Harshit"/>	Technical Skills	<input type="text" value="6"/>
Roll no	<input type="text" value="16891A0514"/>	Communication Skills	<input type="text" value="6"/>
Aggregate	<input type="text" value="55"/> %	Backlogs	<input type="text" value="4"/>

You might get selected


Predict



- Even if the student has more CGPA if he is poor in technical skills , model predicts its as 'REJECTION'. As the model has learned from the data of NON placed students.

Placement Prediction

Placement Prediction of Students



Name	<input type="text" value="K.Venkat"/>	Technical Skills	<input type="text" value="4"/>
Roll no	<input type="text" value="16891A0526"/>	Communication Skills	<input type="text" value="6"/>
Aggregate	<input type="text" value="70"/> %	Backlogs	<input type="text" value="3"/>

You might not get selected

Predict



DESCRIPTIONS:

- According to the target function which the algorithm has formed and came to a conclusion for predicting whether a student will get placed or not.
- These predictions are formed based on a model which the algorithm has learned from the previous year's data, where the student got placed or not.
- If he has low CGPA and more backlogs but he has good knowledge on technical skills and has well communication skills too, based on that he has a chance of getting placed.



CONCLUSION:

- Student Placement Prediction is a system which predicts student placement status using machine learning techniques. Many projects are there related to educational sector, all these mainly concentrate on student performance predictions.
- All these predictions help the institute to improve the student performance and can come up with 100% results.
- Many of the previous projects concentrate on a less number of parameters such as CGPA and Arrears for placement status prediction which leads to less accurate results, but proposed work contains many educational parameters to predict placement status which will be more accurate.



REFERENCES:

RESEARCH PAPER REFERENCES:

- [1] “Student Placement Analyzer: A Recommendation System Using Machine Learning” 2017 International Conference on advanced computing and communication systems (ICACCS-2017), Jan 06-07,2017, Coimbatore, INDIA.
- [2] “Prediction Model for Students Future Development by Deep Learning and TensorFlow Artificial Intelligence Engine” 2018 4th IEEE International Conference on Information Management.

BOOK REFERENCES:

- [1] Master Machine Learning Algorithms by JASON BROWN LEE
- [2] Hands on machine learning with sci-kit learn 2017 by Aurélien Géron



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Thank You !