Project Recort

Template

Introductaion

Campus placement or campus recruiting is a program conducted within universities or other educational institutions to provide jobs to students nearing completion of their studies. In this type of program, the educational institutions partner with corporations who wish to recruit from the student population**.**

1.1 Overview

- Placement management software enables you to plan placements, train students in accordance with relevant market demands, organize placement drives, and allow companies to recruit students.

- The placement software takes complete control of any college's placement efforts right from nurturing an employer to hiring from an institute to training, evaluation, and job fitment.

- In addition, it manages the student and placement cell information, allows students to create profiles, apply for jobs, get shortlisted with greater visibility, involve in internship activities, and do much more. A smart placement management system also maintains accurate student data records, placement scheduling, and student notifications to stay tuned and track placements in order to achieve your institution's lofty goals

1.2 Purpose

Campus placement is a program organized in colleges and universities or other te their degrees. In this program, educational organizations join with companies that wish to recruit students. When companies come to the college or university campus, they start the process of giving jobs by taking interviews and then hiring students who seem to fit in the role required by the company

Problem Definition & Design Thinking

2.1 Empathy Map
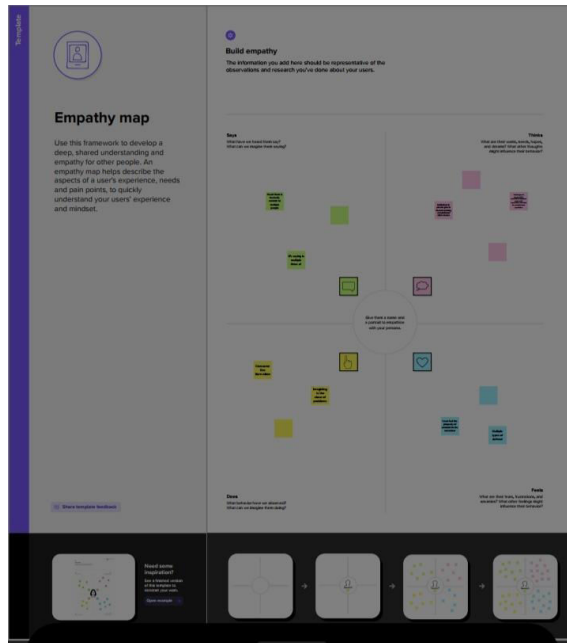
2.2 Ideation & Brainstorming map

3 RESULT

the two algorithms applied random forest shown the best results. The efficiency of the two approaches is compared in terms of the accuracy.

The accuracy of the prediction model/classifier is defined as the total number of correctly predicted/classified instances. Accuracy is given by using following formula:

$$Accuracy = (TP+TN/TP+FN+FP+TN)*100$$

where TP, TN, FN, FP represents the number of true positives, true negative, false negative and false positive cases.

	0	1
0	122	17
1	17	105

Figure 3. confusion matrix of random forest algorithm

	0	1
0	128	11
1	30	92

Figure 4. confusion matrix of decision tree algorithm

Table 1. Comparision of the performances of various algorithms

Algorithms	Accuracy	Precision	Recall
Random forest	86%	0.877	0.87
Decision Tree	84%	0.92	0.81

90
placement
0

4 ADVANTAGES & DISADVANTAGE

Campus recruitment activity offers several advantages to both the companies as well as the job applicants. Following are some of the main advantages of campus recruitment listed below -

- The companies will be benefited from getting wide choice of candidates to select for different job posts. Companies can select the right and talented candidate from a vast pool of young applicants within a limited time. On the other hand, students have the advantage of getting a good job according to their qualification level even before the completion of their academic course in college.

- Campus recruitment helps in saving time and efforts of the companies. The entire campus recruitment process from a college is not a tedious toil. It prevents the occurrence of unusual expenditures related to recruitment process such as advertisement, initial screening, and final selection procedures etc. This in turn turns to be useful in reduced manpower effort and time as well.

- An organization through effective campus recruitment finds an opportunity to establish a link with the next batch of students. This in turn paves way to serve the future and long term recruitment needs of the company. Students participating in internships and summer training programs may have direct recruitment to different job positions offered by the company.

- Campus recruitment helps in increased selection ratio. More number of quality candidates can be selected through this recruitment process.

- The organizations can built up more company loyalty through campus selection process. Fresh and talented graduates will work more closely with their first company. Hence, this in a way will increase the brand loyalty among different applicants.

Disadvantages of Campus Recruitment

- Campus recruitment is an expensive affair for majority of the companies as it adds up costs to the bottom line. Companies incur different expenses related to travel, boarding, training etc while conducting campus selection process. The experienced and skilled candidates having practical job exposures cannot be recruited through campus

placements. Fresh candidates selected through campus placements require adequate training for work. This is an additional expense for the company.   Also, students can't work with their dream company and will have to remain satisfied with the company that recruits them during campus selection .

5 APPLICATION

There are four major ways through which you can apply for an off-campus job opportunity in a company:

Careers Page

Job Referrals

Hiring Challenges

Talk to a Recruiter

Careers Page

Almost every company has a career page where they post all their job openings. Regularly check the career page and apply for a suitable job opening.

Where to find the careers page?

Open the website of the company you wish to apply to

Scroll to the bottom of the webpage

You will find the link to the "Careers" or "Job" page there

Link to the career pages of some of the top product-based companies:

Google Careers

Facebook Careers

Microsoft Careers

Amazon Jobs

Flipkart Careers

Uber Careers

Tower Research Careers

Bloomberg Careers

DE Shaw Careers

Goldman Sachs Careers

Intuit Careers

Expedia Careers

Booking Careers

MakeMyTrip Careers

You can also check for job openings on job portals like: workattech jobs, LinkedIn Jobs, AngelList, InstaHyre, Naukri, etc.

If you do not find relevant openings on the career pages, you can email the company by sending a proper application mail with your resume.

How to find the email address?

Google for "careers@replace_with_company_domain" and "jobs@replace_with_company_domain" and check if any of it comes up in the search results.

Job Referrals

The ratio of selections to job applications is extremely low at most companies. To increase this ratio, companies generally have an incentive program for its employees to refer people they think would be good hires.

A referral is a very good option to get an interview call from a company. Many companies skip the preliminary tests for referrals and start with the main interview process.

Referral Process at most companies:

You reach out to a person working in the company you want to apply to

The referrer then shares your profile with the recruiter

The recruiter gets in touch with you if your profile matches with the job requirements

Interview!

If you have seniors working at your dream companies then it should be fairly easy for you to get a referral. Otherwise, you can reach out to people on LinkedIn to get referrals.

Hiring Challenges

Many companies host hiring challenges on platforms like HackerRank, HackerEarth, TechGig, etc. Most popular formats of such hiring challenges:

- DSA coding questions

- DSA coding questions along with MCQs on CS concepts.

- Development challenges

6 CONCLUSION

End of placement evaluation form and feedback

At the completion of placement, students and supervisors should complete the end of placement evaluation form. It is the student's responsibility to arrange for a time for feedback no later than the last day of placement. Students or supervisors may contact the Placement Coordinator or Course Convenor and request the attendance of one of the University staff at the meeting. This evaluation form should be forwarded to the Placement Coordinator, with the supervisor and the student also keeping copies.

Goals for future placement

In addition to completion of a final evaluation form, the supervisor and the student are requested to complete a form identifying goals for future placement. These goals will identify the competency areas that are seen as requiring further development. This form must be taken by the student to his/her next placement for the subsequent supervisor to review and sign, and should also be forwarded to the Placement. This particular measure enables some continuity between placements.

Performance of students

To determine what merits satisfactory or unsatisfactory performance on placement, you may find the following suggestions to be helpful in evaluating student progress:

Consider student's trainee status. Students are not expected to operate as fully independent clinicians or to possess the skill set of experienced clinicians.

Consider students' skill sets with respect to their stage of training (e.g., 1st, 2nd, 3rd, or final placement).

Upon completion of their final placement, consider whether students are "Ready for entry-level clinical employment." Some competencies may still be developing, as all clinicians continue to develop over time and with appropriate supervision.

It is expected that students attain a minimum rating of "satisfactory" for each of their placements. If a supervisor has reservations about rating a student's performance as "satisfactory," or about rating a final placement student as "Ready for entry level clinical employment," he or she may contact the Placement Coordinator or Course Convenor for discussion.

7 FUTURE SCOPE

Campus placement is considered as an institutional obligation and merit. The ranking of the institutions is based on the number of students placed successfully and the average salary offered. Due to the ongoing conditions the campus recruitment and placement landscape has been altered and has gone through various changes and challenges. There are institutes who have had to regretfully informed students of revoked job offer and are still facing a tough time to get companies onboard for further placements. The paper talks about the recruitment / placement scenario in general for both graduate and post graduates in India based on the primary research work done. Data was collected from 39 companies and analyzed to understand the placement scenario for the students who will undergo the drive in 2021. The paper also tries to understand the recruitment drive pattern for various companies' whether online will now be routine or are the companies still willing to come to campus for the drive. It analyzes the campus recruitment landscape for future purposes in contrast with the current happenings.

8 APPENDIX

IMPORTING THE LIBRARIES

```
import numpy as np
import pandas as pd
import os


import seaborn as sns
import matplotlib.pyplot as plt
from sklearn import svm
from sklearn.metrics import accuracy_score
from sklearn.neighbors import KNeighborsClassifier
from sklearn import metrics
from sklearn.model_selection import cross_val_score
from sklearn import preprocessing
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
import joblib
from sklearn.metrics import accuracy_score
```

READ THE DATASET

```
df = pd.read_csv(r"/content/collegePlace.csv")
df.head()
```

DATA PREPRATION

HANDLING MISSING VALUES

```
df.info()
```

```
df.isnull().sum()
```

HANDLING OUTLIERS

```
def transformationplot(feature):
    plt.figure(figsize=(12,5))
    plt.subplot(1,2,1)
    sns.distplot(feature)

transformationplot(np.log(df['Age']))
```

HANDLING CATEGORICAL VALUES

```
df = df.replace(['Male'], [0])
df = df.replace(['Female'], [1])
```

```
df = df.replace(['Computer Science', 'Information Technology','Electronics And Communication','Mechanical','Electrical','Civil'],
                [0,1,2,3,4,5])
```

```
df = df.drop(['Hostel'], axis=1)
```

EXPLORITRY DATA ANALYSIS

VISUAL ANALYSIS

UNIVARIATE ANALYSIS

```
plt.figure(figsize=(12,5))
plt.subplot(121)
sns.distplot(df['CGPA'],color='r')
```

```
plt.figure(figsize=(12,5))
plt.subplot(121)
sns.distplot(df['PlacedOrNot'],color='r')
```

BIVARIATE ANALYSIS

```
plt.figure(figsize=(18,4))
plt.subplot(1,4,1)
sns.countplot(data['Gender'])
plt.subplot(1,4,2)
sns.countplot(data['Education'])
plt.show()
```

MULTIVARIATE ANALYSIS

```
plt.figure(figsize=(20,5))
plt.subplot(131)
sns.countplot(df["PlacedOrNot"],hue=df['CGPA'])
```

```
sns.swarmplot(df['PlacedOrNot'],df['CGPA'],hue=df['Stream'])
```

MODEL BULIDING

SVM MODEL

```
classifier = svm.SVC(kernel='linear')

classifier.fit(X_train, Y_train)

SVC(kernel='linear')

X_train_prediction = classifier.predict(X_train)
training_data_accuracy = accuracy_score(X_train_prediction, Y_train)

print('Accuracy score of the training data : ', training_data_accuracy)
```

KNN MODEL

```python
best_k = {"Regular":0}
best_score = {"Regular":0}
for k in range(3, 50, 2):

    ## Using Regular training set
    knn_temp = KNeighborsClassifier(n_neighbors=k)                      # Instantiate the model
    knn_temp.fit(X_train, Y_train)                                      # Fit the model to the training set
    knn_temp_pred = knn_temp.predict(X_test)                            # Predict on the test set
    score = metrics.accuracy_score(Y_test, knn_temp_pred) * 100         # Get accuracy
    if score >= best_score["Regular"] and score < 100:                  # Store best params
        best_score["Regular"] = score
        best_k["Regular"] = k
```

```python
print("---Results---\nK: {}\nScore: {}".format(best_k, best_score))
## Instantiate the models
knn = KNeighborsClassifier(n_neighbors=best_k["Regular"])
## Fit the model to the training set
knn.fit(X_train, Y_train)
knn_pred = knn.predict(X_test)
testd = accuracy_score(knn_pred, Y_test)
```

```python
import tensorflow as tf
from tensorflow import keras
from keras.models import Sequential
from tensorflow.keras import layers
```

```python
[ ]  classifier = Sequential()

     #add input layer and first hidden layer
     classifier.add(keras.layers.Dense(6,activation = 'relu', input_dim = 6))
     classifier.add(keras.layers.Dropout(0.50))
     #add 2nd hidden layer
     classifier.add(keras.layers.Dense(6,activation = 'relu'))
     classifier.add(keras.layers.Dropout(0.50))

     #final or output layer
     classifier.add(keras.layers.Dense(1, activation = 'sigmoid'))
```

```python
[ ]  #Compiling the model

     loss_1 = tf. keras.losses.BinaryCrossentropy()

     classifier.compile(optimizer = 'Adam', loss = loss_1 , metrics = ['accuracy'])
```

```python
[ ]  #fitting the model
     classifier.fit(X_train, Y_train, batch_size = 20, epochs = 100)
```

MODEL DEPLOYMENT

SAVE THE BEST MODEL

```
[ ]  import pickle

     pickle.dump(knn,open("placement.pkl",'wb'))
     model = pickle.load(open('placement.pkl', 'rb'))
```

INTEGRATE WITH WEB FRAMEWORK

BUILDING HTML PAGES(PART1)

```
<section id="hero" class="d-flex flex-column justify-content-center">
  <div class="container">
    <div class="row justify-content-center">
      <div class="col-xl-8">
        <h1>The Prediction is : {{y}}</h1>
        <h3> 0 represents Not-Placed </h3>
        <h3> 1 represents Placed<h2>


      </div>
    </div>
  </div>
</section><!-- End Hero -->
```

BUILDING HTML PAGES (PART2)

```
<section id="about" class="about">
  <div class="container">

    <div class="section-title">
      <h2>Fill the details</h2>

    </div>
    <div class="row content">
      <div class="first">
        <form action="{{ url_for('y_predict')}}" method="POST">
          <input type="number" id="sen1" name="sen1" placeholder="Age">
          <input type="number" id="sen2" name="sen2" placeholder="Gender M(0),F(0)">
          <input type="number" id="sen3" name="sen3" placeholder="Stream CS(0),IT(1),ECE(2),Mech(3),EEE(4),Civil
          <input type="number" id="sen4" name="sen4" placeholder="Internships">
          <input type="number" id="sen5" name="sen5" placeholder="CGPA">
          <input type="number" id="sen6" name="sen6" placeholder="Number of backlogs">
          <input type="submit" value="Submit">

        </form>
      </div>
    </div>

  </div>
</section><!-- End About Us Section -->
```

```html
<section id="hero" class="d-flex flex-column justify-content-center">
  <div class="container">
    <div class="row justify-content-center">
      <div class="col-xl-8">
        <h1>Identifying Patterns and Trends in Campus Placement Data using Machine Learning</h1>
      </div>
    </div>
  </div>
</section><!-- End Hero -->
```

IMPORT THE LIBRARIES

```python
from flask import Flask, render_template , request
app=Flask(__name__)
import pickle
import joblib
model=pickle.load(open("placement123.pkl",'rb'))
ct=joblib.load('placement')
```

RENDER HTML PAGES

```python
@app.route('/')
def hello():
    return render_template("index.html")
```

```python
@app.route('/guest' , methods = ["POST"])
def Guest():

    sen1=request.form["sen1"]
    sen2=request.form["sen2"]
    sen3=request.form["sen3"]
    sen4=request.form["sen4"]
    sen5=request.form["sen5"]
    sen6=request.form["sen6"]


@app.route('/y_predict' , methods = ["POST"])
def y_predict():
    x_test = [[(yo) for yo in request.form.values()]]

    prediction =model.predict(x_test)


    prediction = prediction[0]


    return render_template("secondpage.html",y=prediction)
```

MAIN FUNCTION

```python
app.run(debug=True)
```