1. INTRODUCTION

1.1 Overview

Campus placement project refers to the process of recruiting students from educational institutions for employment in various organizations. The project involves various stages such as scheduling interviews, conducting aptitude tests, and selecting candidates based on their skills, knowledge, and academic performance.

The campus placement project typically involves collaboration between educational institutions and employers. Companies provide job descriptions and requirements, while educational institutions advertise the vacancies to students and arrange for campus interviews. Students who meet the eligibility criteria are shortlisted and called for interviews, and the final selection is made based on their performance in the interviews and other selection criteria.

The campus placement project is beneficial for both employers and students. For employers, it provides a pool of talented and qualified candidates who are looking for job opportunities. For students, it provides an opportunity to get placed in a good company and start their career immediately after graduation.

To carry out a successful campus placement project, educational institutions need to have a strong placement cell that can coordinate with companies, conduct aptitude tests, and provide training to students to help them prepare for the interviews. The placement cell should also maintain a database of students and their skills and provide support to students in preparing their resumes and cover letters.

1.2 Purpose

The campus placement project achieves several objectives, including:

1. **Employment opportunities**: Campus placement provides students with a platform to showcase their skills and get employed in reputed organizations. This helps students kickstart their career and get a head start over their peers who may have to look for employment opportunities after completing their education.

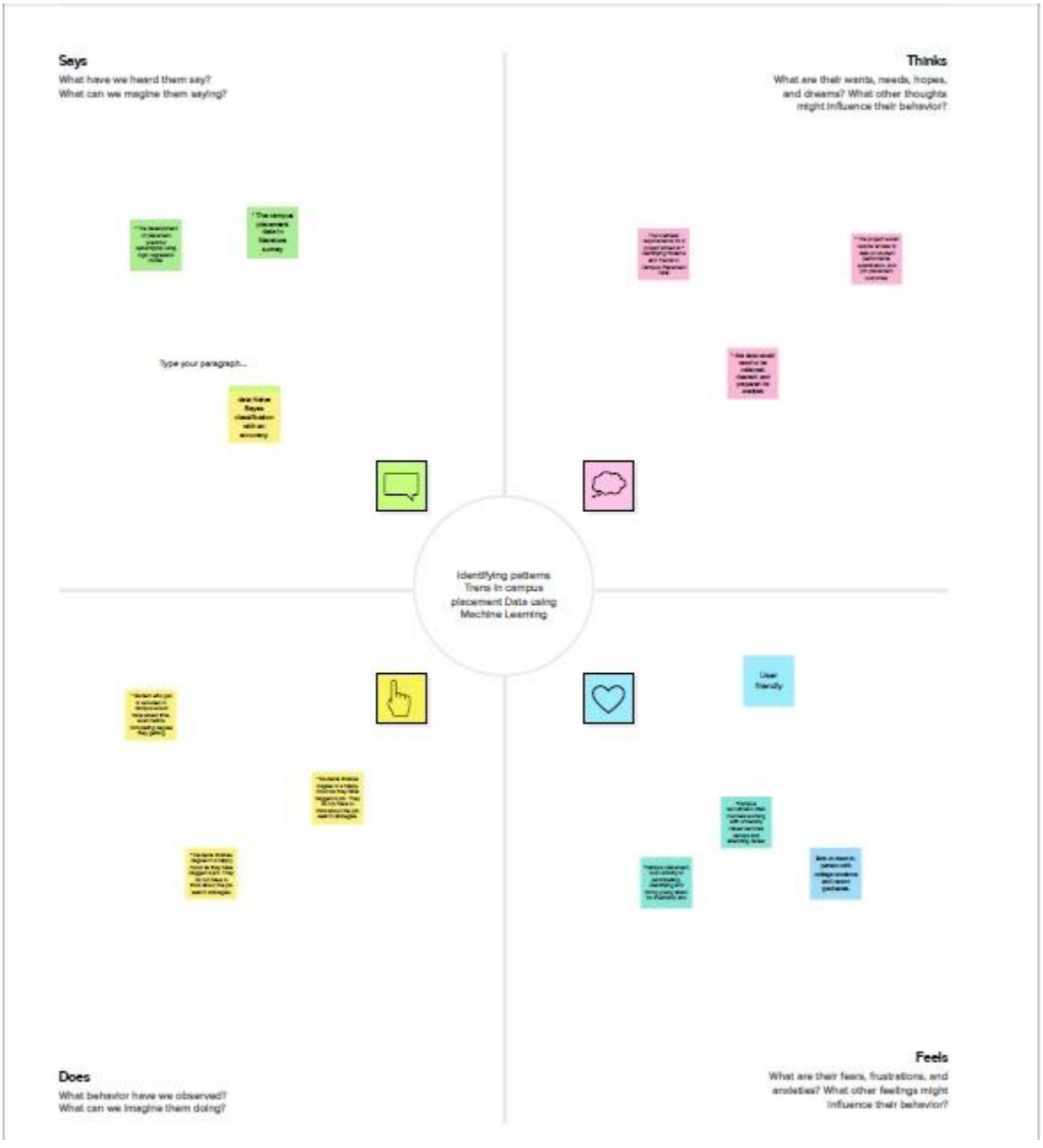
2. **Industry exposure:** Campus placement provides students with an opportunity to interact with companies and understand the requirements of the industry. This helps students gain industry exposure and understand the skills and knowledge required to succeed in their chosen field.

3. **Skill development:** Campus placement helps students develop their skills and knowledge by providing them with training and coaching sessions. This helps students improve their aptitude and technical skills, making them more employable.

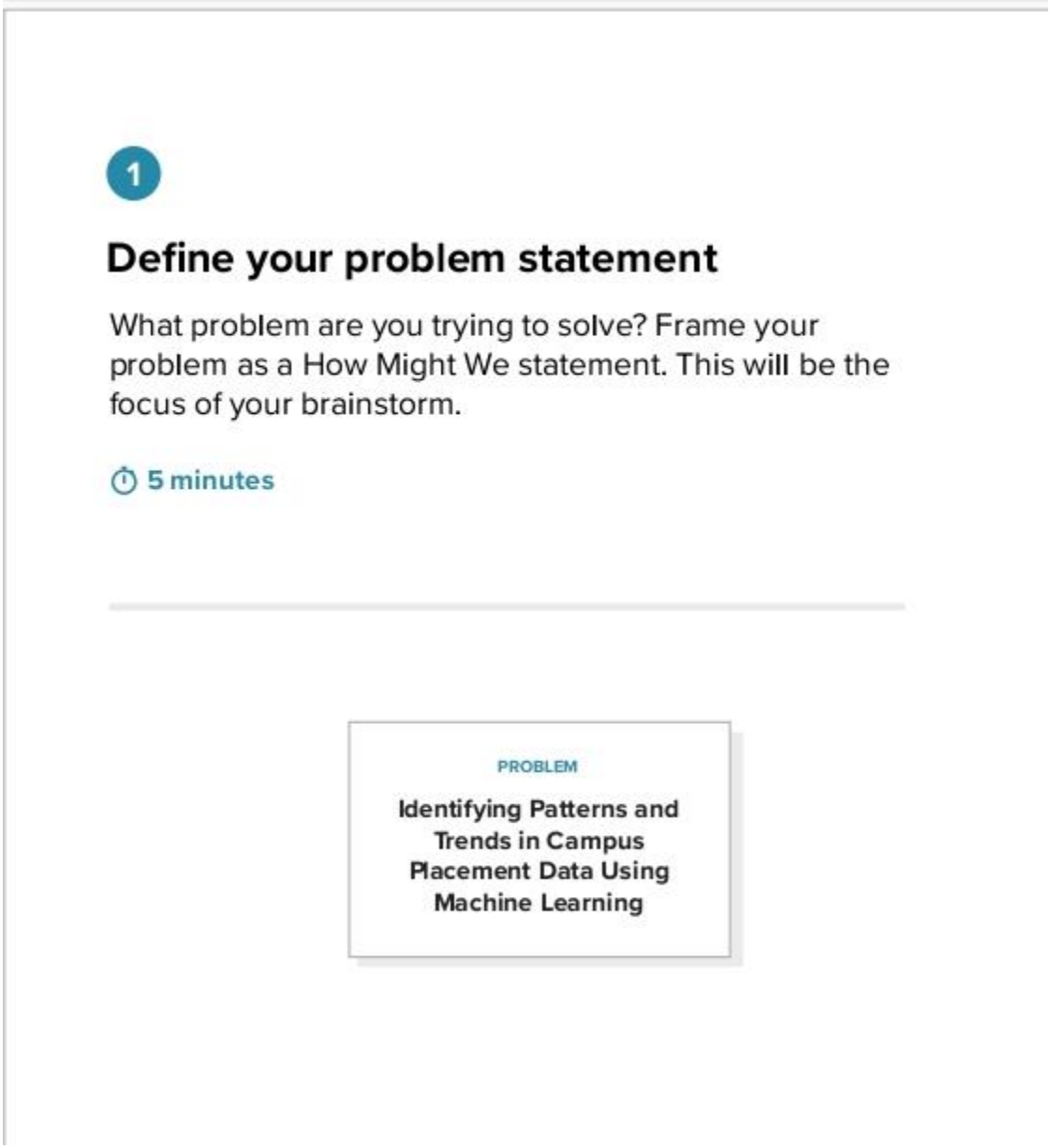
4. **Industry-academia collaboration:** Campus placement provides a platform for collaboration between educational institutions and companies. This helps educational institutions understand the requirements of the industry and align their curriculum with the needs of the industry. This also helps companies find the right talent that matches their requirements

2. PROBLEM DEFINITION & DESIGN THINKING

2.1 EMPATHY MAP



2.2 IDEATION & BRAINSTORMING MAP



Brainstorm

Gracy jasmine

* The campus placement data in literature survey

*A system which was used to analyze the performance of students using k-means clustering algorithm.

* The 75%Dist and above 60% first class

Janani

* Students finishes degree in a happy mood as they have bagged a job. They do not have to think about the job search strategies

* Student who get's recruited in campus would have saved time, even before completing degree they getting recruited that is lot's of time saved

* Business for a project aimed at "Identifying patterns and trends in campus placement Data using Machine Learning".

mohana priya

machine learning is a branch of artificial intelligence and computer science which focuses on the use of

data and algorithms to imitate the way that humans learn, gradually improving its accuracy.

*The project would require access to data on student performants, qualification, and job placement outcomes.

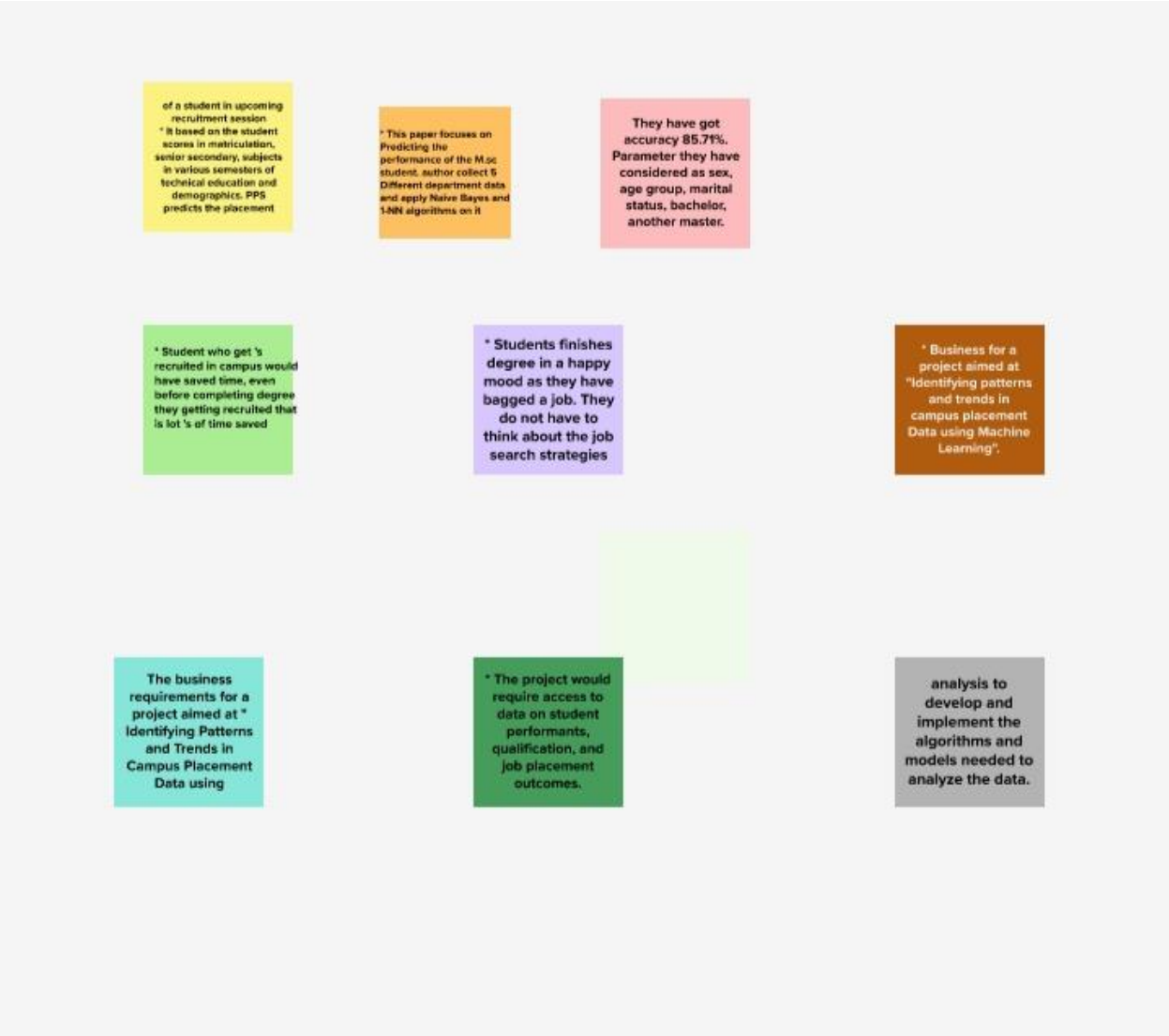
nivetha

*campus placement is an activity of participating, identifying and hiring young talent for internship and

entry level positions.

Campus recruitment is a strategy for sourcing, engaging and hiring young talent for internship and

Group ideas


of a student in upcoming recruitment session
* It based on the student scores in matriculation, senior secondary, subjects in various semesters of technical education and demographics. PPS predicts the placement
* This paper focuses on Predicting the performance of the M.sc student. author collect 5 Different department data and apply Naive Bayes and 1-NN algorithms on it
They have got accuracy 85.71%. Parameter they have considered as sex, age group, marital status, bachelor, another master.
* Student who get 's recruited in campus would have saved time, even before completing degree they getting recruited that is lot 's of time saved
* Students finishes degree in a happy mood as they have bagged a job. They do not have to think about the job search strategies
* Business for a project aimed at "Identifying patterns and trends in campus placement Data using Machine Learning".
The business requirements for a project aimed at * Identifying Patterns and Trends in Campus Placement Data using
* The project would require access to data on student performants, qualification, and job placement outcomes.
analysis to develop and implement the algorithms and models needed to analyze the data.

Prioritize

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

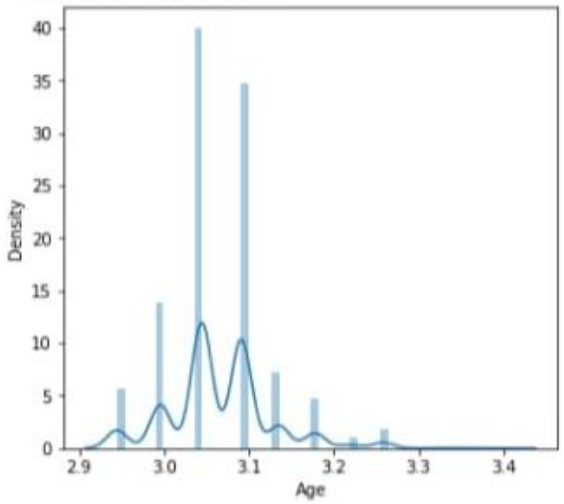
3. RESULT

Handling outliers

```
def transformationplot(feature):
  plt.figure(figsize=(12,5))
  plt.subplot(1,2,1)
  sns.distplot(feature)
transformationplot(np.log(df['Age']))
```

For a guide to updating your code to use the new functions, please see
https://gist.github.com/mwaskom/de44147ed2974457ad6372750bbe5751

```
sns.distplot(feature)
```



Univariate analysis

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

```
Please adapt your code to use either `displot` (a figure-level function with
similar flexibility) or `histplot` (an axes-level function for histograms).

For a guide to updating your code to use the new functions, please see
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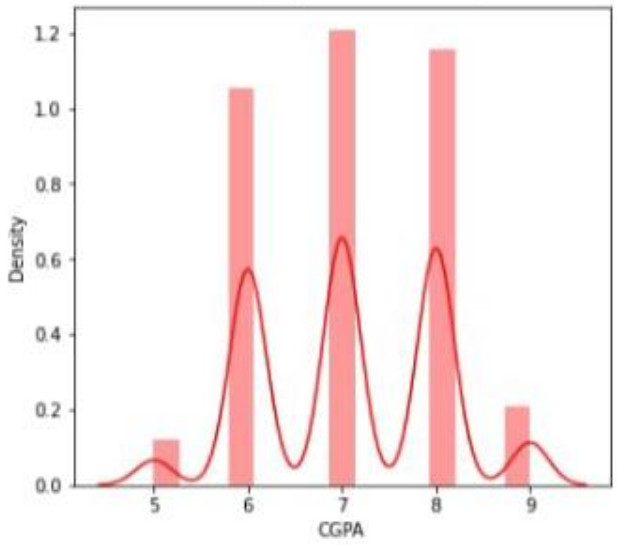
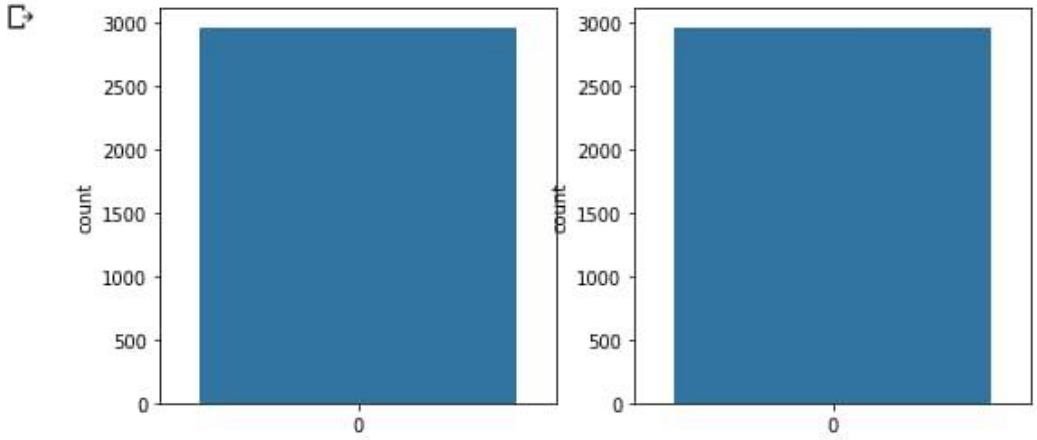
  sns.distplot(df['CGPA'],color='r')
<Axes: xlabel='CGPA', ylabel='Density'>
```



Bivariate analysis

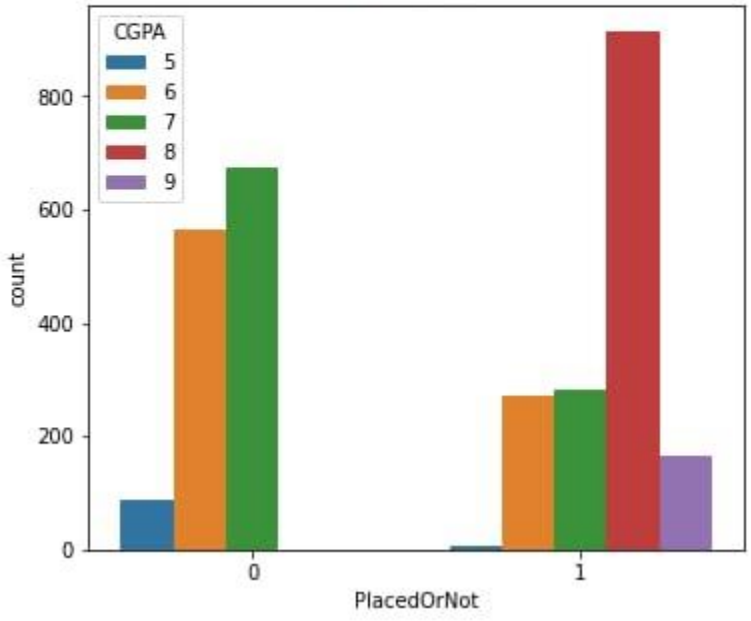
```
plt.figure(figsize=(18,4))
plt.subplot(1,4,1)
sns.countplot(df['Gender'])
plt.subplot(1,4,2)
sns.countplot(df['Stream'])
plt.show()
```



Multivariate analysis

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

```
<Axes: xlabel='PlacedOrNot', ylabel='count'>
```



4. ADVANTAGES & DISADVANTAGES

Campus placement is a process where companies visit educational institutions to recruit students for full-time employment. While campus placement offers certain advantages, there are also some disadvantages.

Advantages of Campus Placement:

1. **Easy access to job opportunities:** Campus placement offers students easy access to job opportunities, saving them the time and effort required to search for jobs.

2. **A wider range of job options:** Students get to choose from a wide range of job options offered by different companies.

3. **Familiarity with the recruiting company:** Students are familiar with the recruiting companies and their work culture as they have already interacted with them during the placement process.

4. **Placement support:** Students receive guidance and support from the placement cell of the educational institution during the entire placement process.

Disadvantages of Campus Placement:

1. **Limited job options:** The job opportunities offered through campus placement are limited to the companies that visit the educational institution.

2. **High competition:** Campus placement attracts a large number of students, resulting in high competition for job positions.

3. **Pressure to accept offers:** Students may feel pressured to accept job offers, even if they are not satisfied with the terms and conditions of the offer.

4. **Unequal opportunities:** Students from prestigious institutions may have an advantage over those from less reputed institutions in securing job offers.

5. APPLICATIONS

Campus placement can be relevant to applications in several ways. Some of the ways in which campus placement can be relevant to applications are:

1. **Career objectives**: In the application process, candidates are often asked about their career objectives and goals. Participating in campus placement and securing a job through this process can demonstrate a candidate's commitment to their career objectives and goals.

2. **Work experience**: Campus placement provides students with an opportunity to gain work experience and develop skills that are relevant to their field of study. This work experience can be highlighted in their applications and can set them apart from other candidates.

3. **Professional references**: During the campus placement process, students interact with recruiters and professionals in their field of study. These professionals can provide references and recommendations for the student's applications, which can enhance their chances of being selected.

4. **Networking**: Campus placement provides an opportunity for students to network with professionals in their field of study. These connections can be leveraged in their applications to demonstrate their knowledge of the industry and their commitment to building a career in that field.

6.CONCLUSION

In conclusion, campus placement provides a convenient and structured platform for students to secure employment. The advantages of campus placement include easy access to job opportunities, a wider range of job options, familiarity with the recruiting company, and placement support. However, there are also certain disadvantages such as limited job options, high competition, pressure to accept offers, and unequal opportunities.

Despite these disadvantages, campus placement remains a popular and important method for companies to recruit fresh talent, and for students to jump-start their careers. It is essential for students to make informed decisions based on their career goals, preferences, and aspirations, and to consider other opportunities available to them outside of campus placement.

To enhance the campus placement process, educational institutions and recruiting companies should work together to increase transparency and fairness, offer skill development programs and training sessions, establish long-term relationships, and provide career counseling and guidance. By making these enhancements, the campus placement process can become more effective, efficient, and beneficial for both students and companies alike.

7.FUTURE SCOPE

There are several enhancements that can be made to the campus placement process to make it more effective and beneficial for students. Some of these enhancements include:

1. Increasing the number and diversity of participating companies to provide students with more job options and opportunities.

2. Offering skill development programs and training sessions to equip students with the necessary skills and knowledge required for the recruitment process and the job market.

3. Introducing transparency and fairness in the recruitment process to ensure that all students are given equal opportunities and that the selection process is merit-based.

4. Establishing long-term relationships with recruiting companies to provide students with opportunities for internships, training, and career growth.

5. Providing career counseling and guidance to help students make informed decisions about their career choices and job offers.

By implementing these enhancements, the campus placement process can become more effective, efficient, and beneficial for students, enabling them to secure better job opportunities and advance their careers. Additionally, with the increasing use of technology and digital platforms, educational institutions can explore the possibility of conducting virtual campus placement drives to reach out to a wider range of companies and students.

Regenerate response

8. APPENDIX

Source code

Import the data set

```
[ ]  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("collegePlace.csv")
    df.head()
```

	Age	Gender	Stream	Internships	CGPA	Hostel	HistoryOfBacklogs	PlacedOrNot
0	22	Male	Electronics And Communication	1	8	1	1	1
1	21	Female	Computer Science	0	7	1	1	1
2	22	Female	Information Technology	1	6	0	0	1
3	21	Male	Information Technology	0	8	0	1	1
4	22	Male	Mechanical	0	8	1	0	1

```
[ ] df.isnull().sum()
```

```
Age                0
Gender             0
Stream             0
Internships        0
CGPA               0
Hostel             0
HistoryOfBacklogs  0
PlacedOrNot        0
dtype: int64
```

Handling outliers

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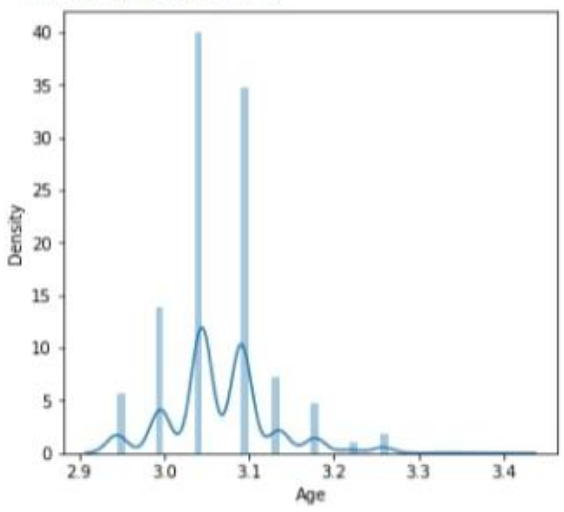

Categorical values

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

df = df.replace(['Computer Science','Information Technology','Electronics And Communicati

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

df
```

	Age	Gender	Stream	Internships	CGPA	HistoryOfBacklogs	PlacedOrNot
0	22	0	2	1	8	1	1
1	21	1	0	0	7	1	1
2	22	1	1	1	6	0	1
3	21	0	1	0	8	1	1
4	22	0	3	0	8	0	1
...	...	...	...	...	...	...	...
2961	23	0	1	0	7	0	0
2962	23	0	3	1	7	0	0
2963	22	0	1	1	7	0	0
2964	22	0	0	1	7	0	0

Visual analysis

Univariate analysis

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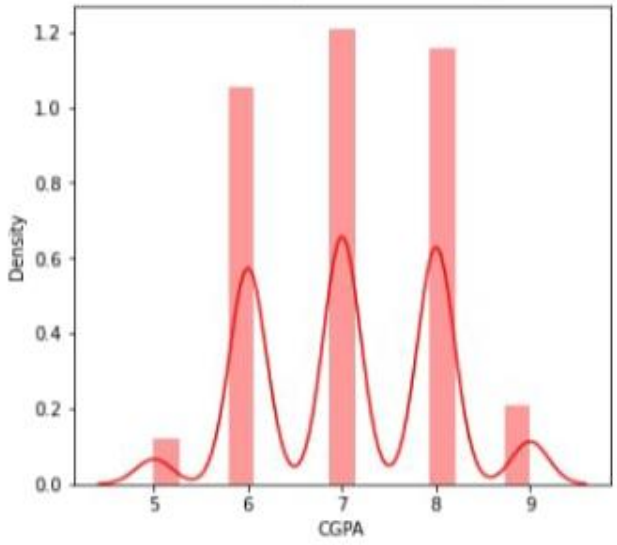

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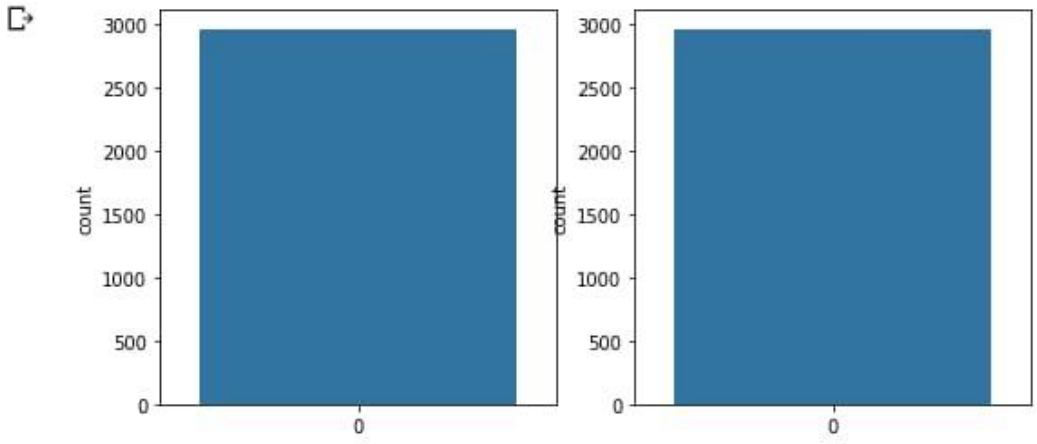

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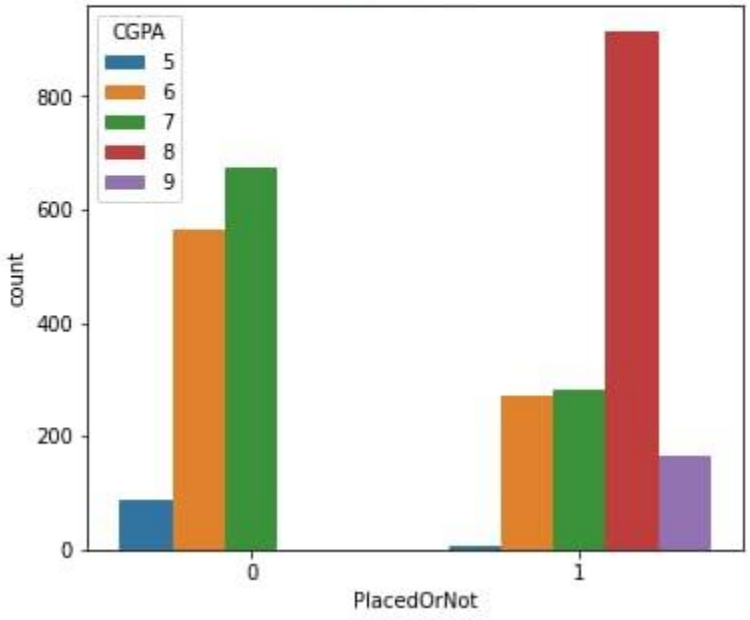

Scaling the data

```
from sklearn.preprocessing import StandardScaler
sc = StandardScaler()
x = sc.fit_transform(df)
x
x = pd.DataFrame(x,columns=df.columns)
```

Double-click (or enter) to edit

```
[ ]  X = df.drop(['PlacedOrNot'], axis =1)
     Y = df['PlacedOrNot']

     X_train,X_test,Y_train,Y_test = train_test_split(X,Y,test_size = 0.2, stratify=Y, random_state=2)
```

Training the model

KNN model

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

         knn_temp = KNeighborsClassifier(n_neighbors=k)
         knn_temp.fit(X_train, Y_train)
         knn_temp_pred = knn_temp.predict(X_test)
         score = metrics.accuracy_score(Y_test, knn_temp_pred)*100
         if score >= best_score["Regular"] and score < 100:
            best_score["Regular"] = score
            best_k["Regular"] = k

     print("---Results---\nk: {}\nScore: {}".format(best_k, best_score))
     knn = KNeighborsClassifier(n_neighbors=best_k["Regular"])
     knn.fit(X_train, Y_train)
     knn_pred = knn.predict(X_test)
     testd = accuracy_score(knn_pred, Y_test)
```

```
---Results---
k: {'Regular': 21}
Score: {'Regular': 87.7104377104377}
```

Artificial neural network model

```
classifier = Sequential()

classifier.add(Dense(6,activation = 'relu'))
#classifier.add(keras.layers.Dropout(0,50))
classifier.add(Dense(6,activation = 'relu'))
#classifier.add(keras.layer.Dropout(0,50))
classifier.add(Dense(1,activation = 'sigmoid'))
loss_1 = tf.keras.losses.BinaryCrossentropy()
classifier.compile(optimizer = 'Adam',loss = loss_1,metrics = ['accuracy'])
classifier.fit(X_train, Y_train, batch_size = 20, epochs = 100)
```