

CAMPUS RECRUITMENT - ANALYSIS

Introduction:

Our Project is primarily focused on the analysis of a data set containing details about students affecting their Campus Recruitment record. The students are chosen based on convinced criteria such as Exam Percentage, Board of education, Degree Specialization, Work Experience, etc.,

This analysis can be applied by Corporate companies in selecting their candidates based on the insights I've drawn in the project. I've used Python language and it's libraries for performing Data cleaning, preprocessing, visualizing and analyzing.

Problem Statement:

The following questions shall be answered during the course of analysis:

- 1) Which factor influenced a student in getting placed?
- 2) Does percentage matters for one to get placed?
- 3) To get placed in a company which board should I choose (Central or State board) in 12th?
- 4) To get placed in a company which board should I choose (Central or State board) in 10th?
- 5) Who is getting more placements girls or boys?
- 6) Which degree specialization is much demanded by corporate?
- 7) Does the degree percentage plays important role in getting good salary?
- 8) Who is mostly not getting placed?
- 9) Which stream students are getting more placed and which stream students are mostly not placed?

Source: <https://www.kaggle.com/benroshan/factors-affecting-campus-placement>

Exploring Data:

We have details about 215 students and each column in the data set contains mixed data types. We have 7 Numerical and 8 Categorical columns. On examining the data set, we identified features such as Gender, Educational qualifications and the educational performance (score). We also have the status of placement and salary details.

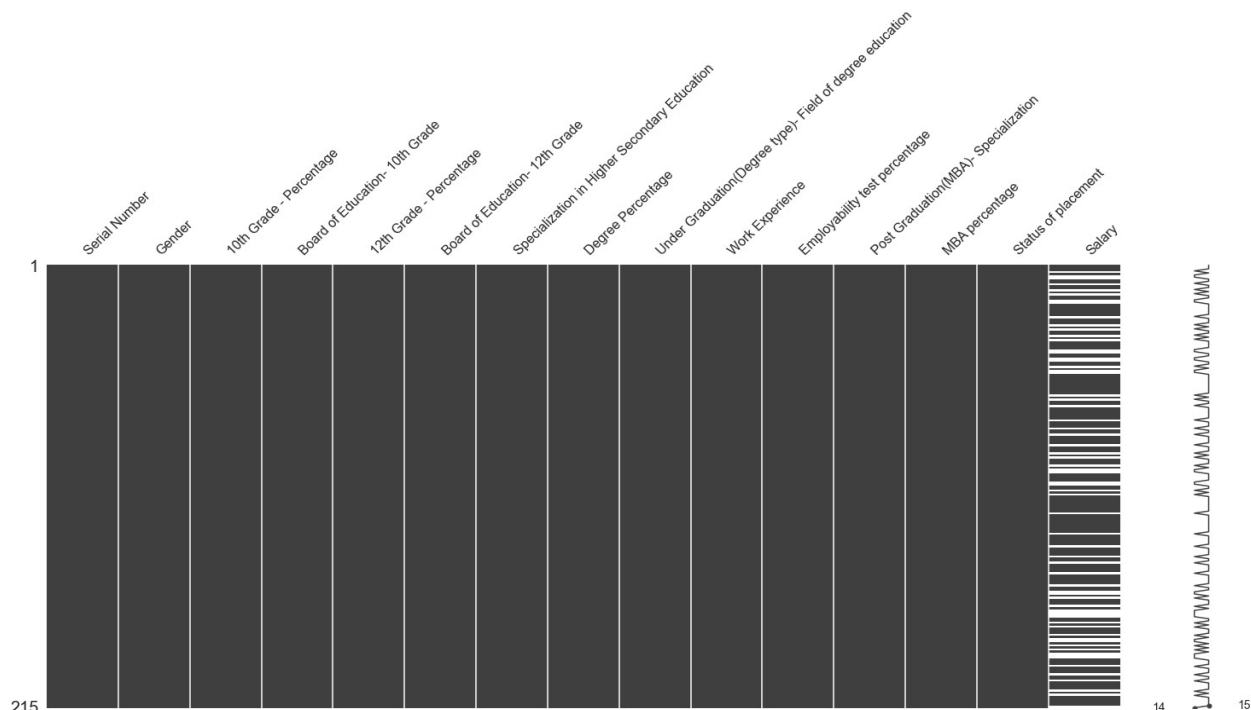
The mean percentage along with minimum, 25%, 50%, 75%, maximum percentages of the students in their class 10, 12, UG Degree, Employability Test, MBA and Salary can be found in the below table.

	Count	Mean	Std	Min	25%	50%	75%	Max
10th Grade - Percentage	215.0	67.303395	10.827205	40.89	60.600	67.0	75.700	89.40
12th Grade - Percentage	215.0	66.333163	10.897509	37.00	60.900	65.0	73.000	97.70
Degree Percentage	215.0	66.370186	7.358743	50.00	61.000	66.0	72.000	91.00
Employability Test Percentage	215.0	72.100558	13.275956	50.00	60.000	71.0	83.500	98.00
MBA Percentage	215.0	62.278186	5.833385	51.21	57.945	62.0	66.255	77.89
Salary	148.0	288655.40	93457.45	200000	240000	265000	300000	940000

Table: 1

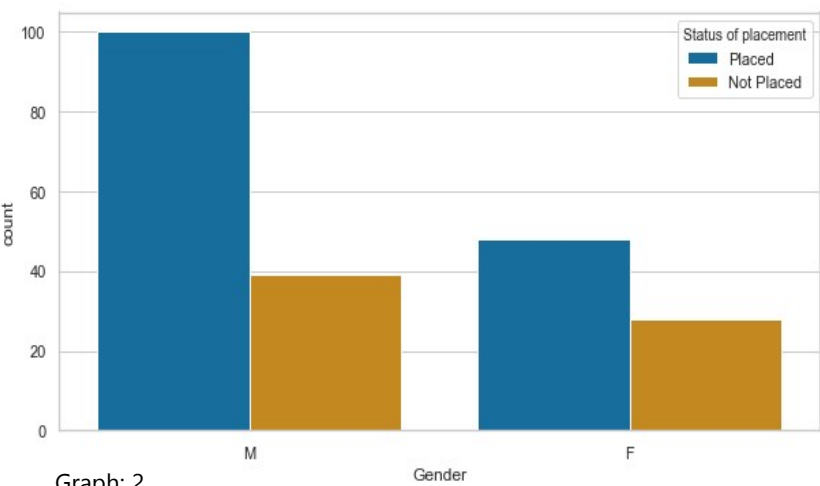
While looking at the numerical summary of the data set, we can interpret that the Salary of candidates are evenly distributed within the range of Rs. 2,00,000 and Rs. 5,00,000 except that there are a couple of data points which are extremely far-off [such as Rs. 9,40,000] from median forming an outlier. The percentages of students across 10th, 12th, UG Degree, PG Degree fall approximately within definite ambit. The minimum percentage of all the students across each fields lies within the range of 40% to 50%. Other 25% of students have their scores in between the range of 55% to 65% and students in 50th percentile have scores ranging between 65% to 75%. Students in

75th percentile scores within the limit of 75% to 85%. Rest of the students score above 85% in all the tests.



As expected, we do have null values in the salary column (Graph: 1) since those are the candidates who were not recruited. These values should not be dropped, as they would furnish useful insight as to why applicants have not been recruited. We must not extrapolate that with mean / median values as it would be in contrast with the sense of data set and it will display salaries for candidates who aren't hired. For unhired applicants, it is appropriate to assign the records with '0'.

Does Gender affect Placement ?



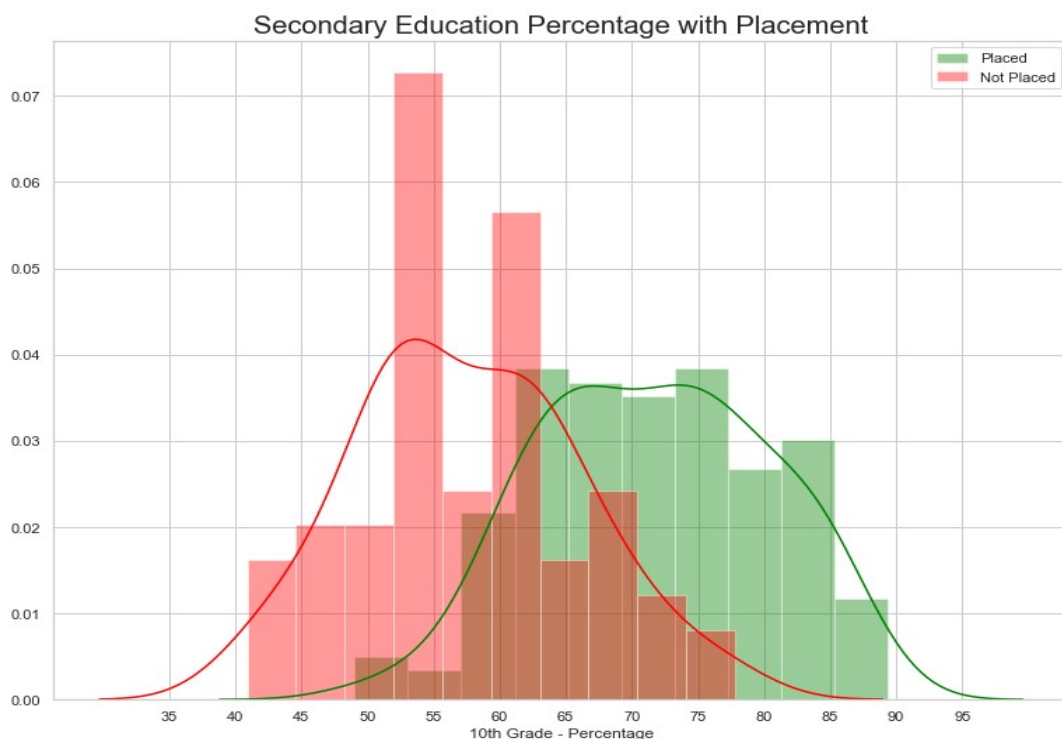
We have results from 139 male and 76 female students which depicts the data being class imbalanced. Out of the total 139 males, 100 were placed and 39 were not placed.

Out of the overall female students, 48 were placed and 28 were not. In contrast to female students, male students appear to be placed in greater numbers, but it is due to the inequal representation of male and female students. Even though the placement differs with gender, there isn't much change in Salary. The average salary of male candidates are slightly higher than the Female Candidate with few males getting extremely high salary.

Does Secondary Education Percentage and Board affect the Placement ?

- **Percentage:**

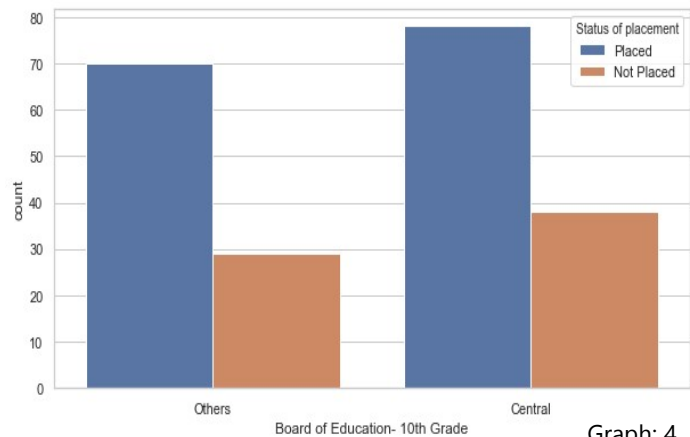
The Kernal Density Estimate (KDE) plot of the Secondary Education Percentage seems to follow a normal distribution (Graph: 3). The plot represents both the placed (Green) as well as the not placed (Red) students. Students scoring more than 80% in their SSC has 100% placement. Students scoring less than 55% are likely to be not placed. Whereas most of the students educational performance are between 65% to 80% and they are placed on an average.



Graph: 3

- **Board:**

The ratio is 80:70, this means that all board students are placed equally and the ratio of students not placed is almost 40:30. There are more central board students, however the placement of the 10th board doesn't affect much.

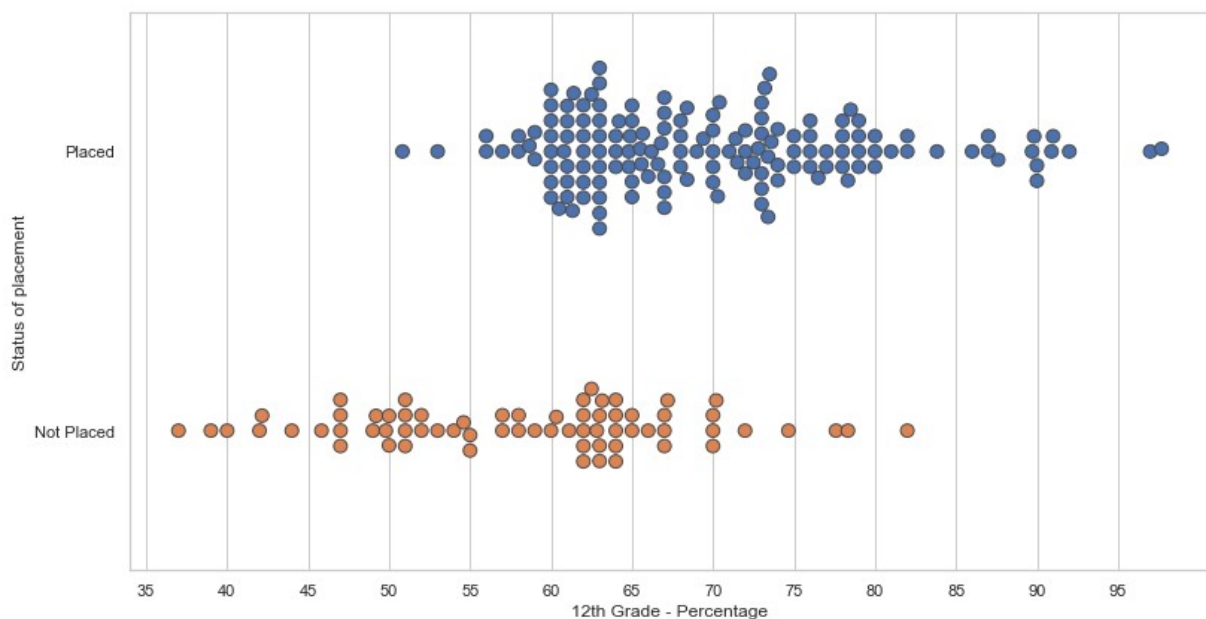


Graph: 4

Does Higher Secondary Education Percentage, Board and Specialization affect the Placement ?

- **Percentage:**

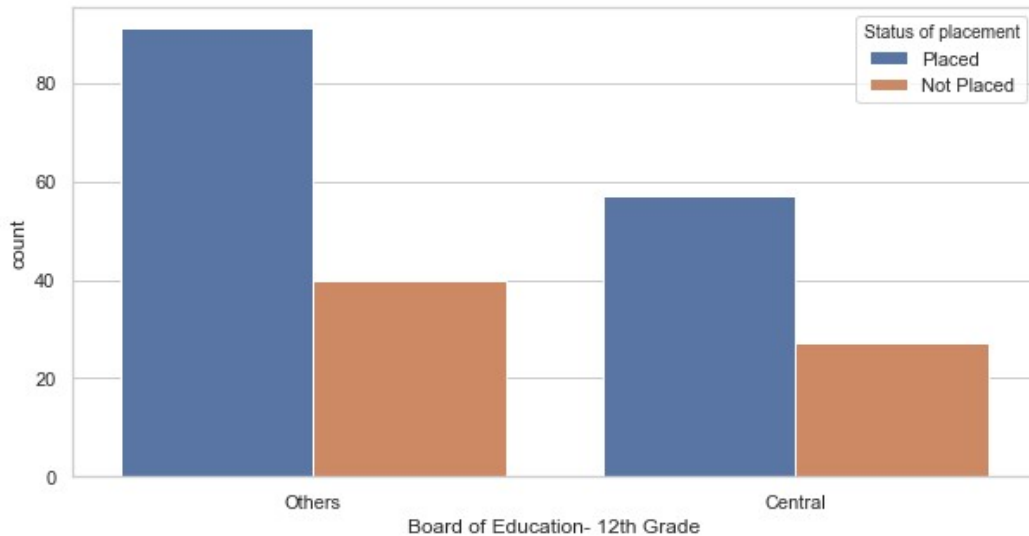
The minimum percentage of students score begins with 37% and students score upto 97%. Students scoring more than 83% in their HSC has assured placement. Students scoring less than 50% are not placed and those who are with scores between 60% to 80% are placed on an average.



Graph: 5

- **Boards:**

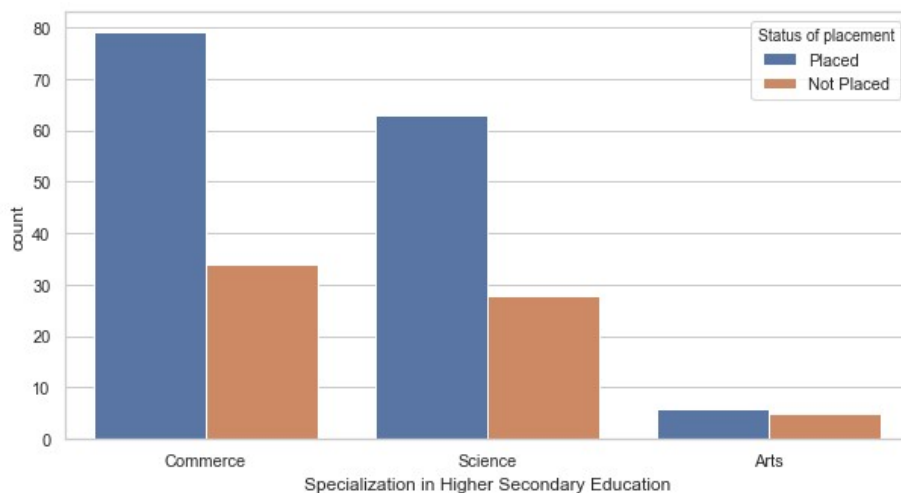
The total number of students in each boards is imbalanced therefore the count can't reveal any robust decision. The placed and unplaced quantitative relation of students with 'Others' as their board is 90:40 which infers that the other board students has slimly lesser rejection rate than the students in 'Central' board which can be identified from the relation of students in central board is 50:25.



Graph: 6

- **Specialization:**

During their Higher Secondary School, the students who choose Commerce specialisation are highly recruited. Arts students are less in number and has a 50-50 chances of getting placed and not placed therefore no decisive reasoning can be made out of it.

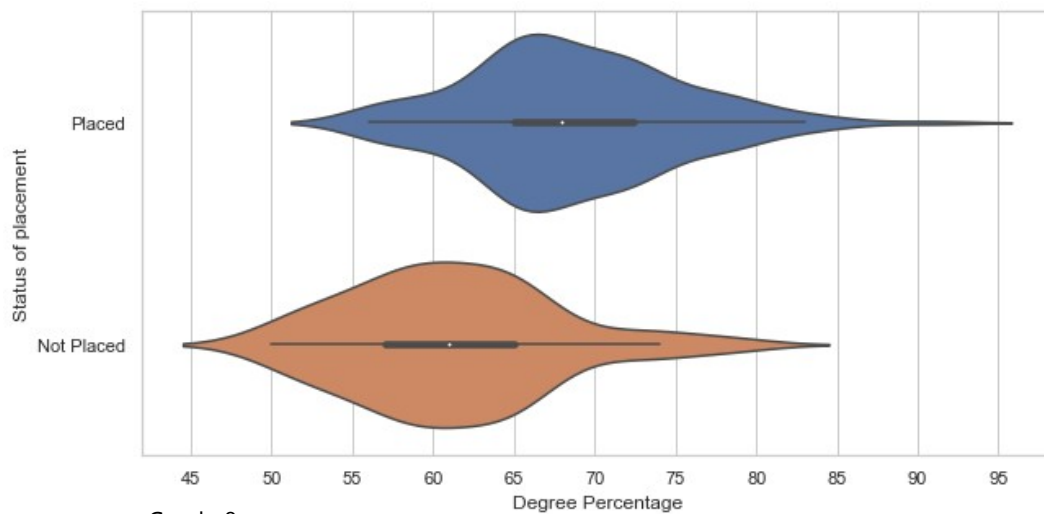


Graph: 7

Does Degree Percentage and Field of Degree Education affect the Placement ?

- **Degree Percentage:**

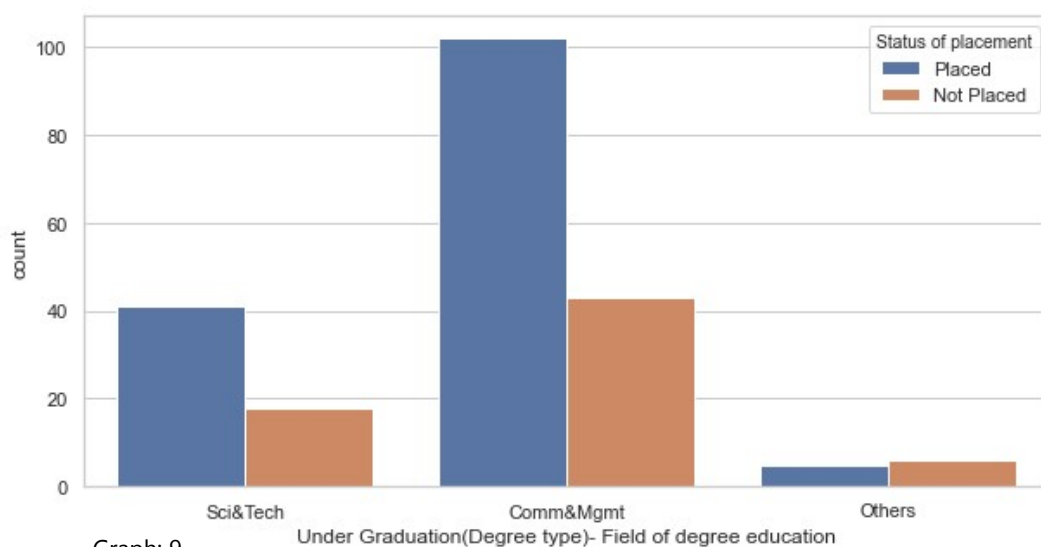
The Violin Plot (Graph: 8) here demonstrates the percentage obtained by the students in UG Degree. Here the minimum percentage for placement is 55% below which no student is selected for job. Assured Placement for students scoring above 80%. Students scoring above 65% have broad opportunity of getting placed.



Graph: 8

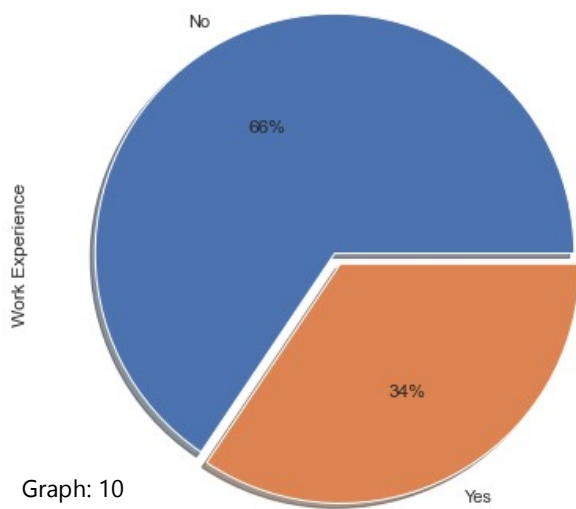
- **Field of Degree Education:**

Commerce & Management department are having great placement record. Science & Technology department has 2:1 ratio of getting placed and unplaced. Very less students with "Others" as their department, therefore we can't make inferences out of it.



Graph: 9

Does Work Experience affect the Placement ?



Graph: 10

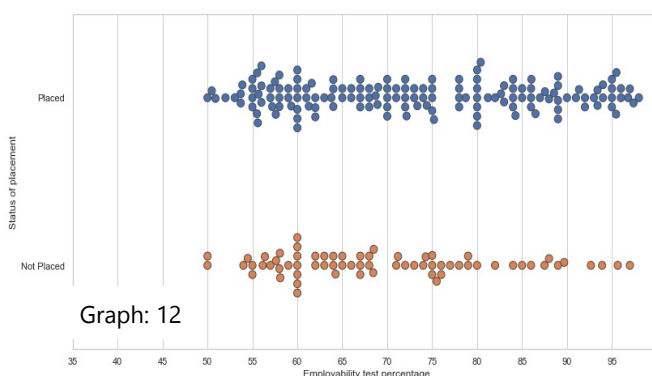
Out of the total candidates, only 34% have work experience and 66% doesn't hold any work experience (Graph: 10). Candidates with 'No work experience' has got placed more than the candidates with work experience. But among the candidates with work experience, they have a very low chance of not getting placed (Graph: 11).



Graph: 11

Does Employability test percentage affect the Placement ?

From the Swarm Plot (Graph: 12) we can deduce that the data points are extremely

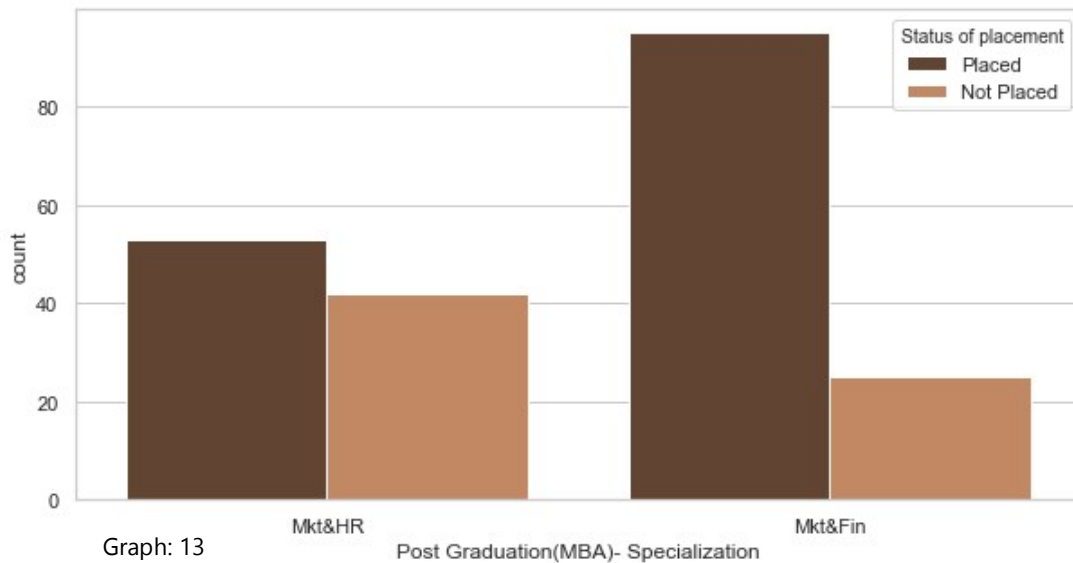


Graph: 12

overlapping, hence this attribute does not affect placement. Yet, there is a considerable amount of students getting placed with percentage above 80%.

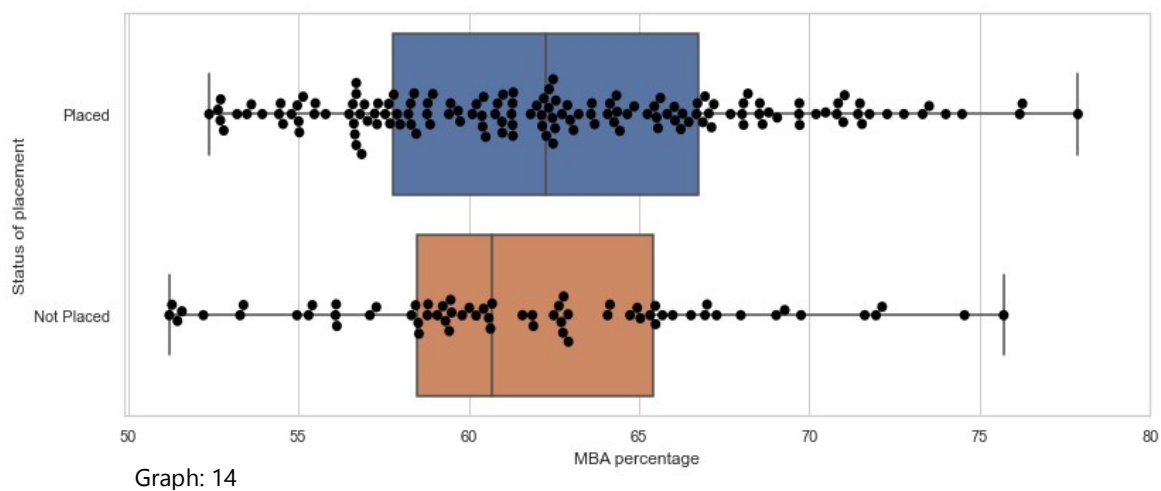
Does Post Graduation(MBA)- Specialization affect placement ?

Since the MBA in finance is one of the most successful and potentially preferred types of MBA specialisation, most students have opted for the same and are successfully placed in large percentages as there are only few students getting rejected. Students with Marketing & HR has tantamount possibility of getting placed and unplaced.



Does MBA Percentage affects Placement ?

No pattern can be identified by MBA Percentage, thus MBA Percentage doesn't affect Placement. But there occurs to be clustering of data points from 57% to 67% exhibiting that there are more students getting placed.



Conclusion:

Here are my conclusions drawn from the analysis performed:

Based on our analysis on the Recruitment Dataset, Gender doesn't dominate the placement to a larger extent yet it does make an impact on salary at a very low level.

Upon exploring the educational percentages of the candidates, the candidates with 80% in their 10th and 12th Grade has got higher plausibility of getting placed. The percentage of candidates seems to be normally distributed. Both the board students (10th & 12th) are getting placed, therefore taking up Central Board or Other Boards doesn't strike the placement of a student significantly.

Moving on to the UG Degree of a candidate, he/she must at least be gaining 55% in their respective UG Degree to have a run at the placement. At an average, Candidates with percentage above 65 has fair chance of getting placed. Candidates with 80% own huge opportunity in placement. Approximately 2:1 - placed,unplaced ratio prevails in the department of Commerce & Management, Science & Technology. We've fewer candidates with 'Others' as their field of degree education, therefore we can't make a bonafide inference out of it.

Candidates with work experience is 34% and without work experience is 66% which confers that there is class imbalancing in the data and this feature does influence placement at micro-level. Candidates with work experience has shallow rejection rate in contrast with candidates with No work experience.

The employability test percentage can't produce valid argument as it is immensely superposed, yet there is noticeable amount of students getting placed with percentage above 80%.

Post Graduation (MBA) program embodies two specializations i.e., Marketing & Finance, Marketing & HR. Out of the two specialization, dismissal proportion of candidates in Marketing & Finance is at ground-level. Marketing & HR has balanced play in winning placement. With regard to percentage in MBA, no pattern can be recognized as the data points doesn't project anything extensible. Hence, Corporate companies can acquire candidates by bringing the above analysis into play.