

## Insights:

- In the dataset, 32% data is of university with rating 3, followed by 2 and 4
- 18% data is of SOP strength 3.5 and same 18% is of SOP strength 4, followed by 3
- 20% of data is of LOR (letter of recommendation) strength 3 followed by strength 4
- 56% data is of the students with research experience
- Chance of admission increases with increase in university rating, with increase in SOP strength, LOR strength and research experience
- Chances of admission are higher for research experienced students across all university ratings, SOP strengths and LOR strengths
- Probability of getting an admission increases with increase in GRE score, TOEFL score and CGPA.
- CGPA, GRE Score & TOEFL Score have very high correlation with chance of admission
- SOP, University Rating, LOR & Research also have positive correlation with chance of admission but slightly lesser than CGPA, GRE Score and TOEFL Score.
- There are no significant outliers & no missing values present in our dataset
- **Regression Analysis:**
  1. From regression analysis, we can say that CGPA is the most important feature in predicting the chances of admission, followed by GRE Score and TOEFL Score
  2. Checked for assumptions: VIF score for all variables found less than 5 so there is no high multicollinearity
  3. Checked for assumptions: Mean of residuals is found nearly zero. Residuals are not exactly normally distributed so some level heteroscedasticity is present
  4. Our linear regression model is not that complex so Ridge(L2) regularization, Lasso(L1) regularization and Elastic Net (L1 + L2) regularization give similar results

## **Recommendations:**

- As we can see that most important feature is CGPA score, followed by GRE & TOEFL score in getting an admission, so Jamboree can help the students to improve their CGPA score along with GRE and TOEFL score
- Jamboree can help to create an awareness in students about research. So, that research experience can help them to get a better university
- Other features like SOP & LOR are also important. So, Jamboree can assist the students to write better SOP and LOR to help them increase their chance of admission in a better university
- The linear regression model can help the students to identify the areas in which they need to improve and also to identify that how much to improve, if they are falling behind in one of the features