

PREDICTING ACCEPTANCE TO GRADUATE SCHOOL BASED ON TEST SCORES AND GPA

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INTRODUCTION/PROBLEM

- Graduate schools and programs are prestigious opportunities for students to enhance their career and skills.
- Entering a graduate school requires skills that differentiate a weak candidate from a strong candidate
- Knowing what the schools value is important for prospect students
- Graduate schools' values can be inferred by analyzing accepted students' profile

DATA ACQUISITION

- Data was acquired from Kaggle dataset, <https://www.kaggle.com/mohansacharya/graduate-admissions>, compiled by Mohan S Acharya.
- Data consists of 400 samples of 9 rows: ID number, GRE Score, TOEFL Score, university rating, statement of purpose, letter of recommendation, cumulative GPA, research, and chance of admittance

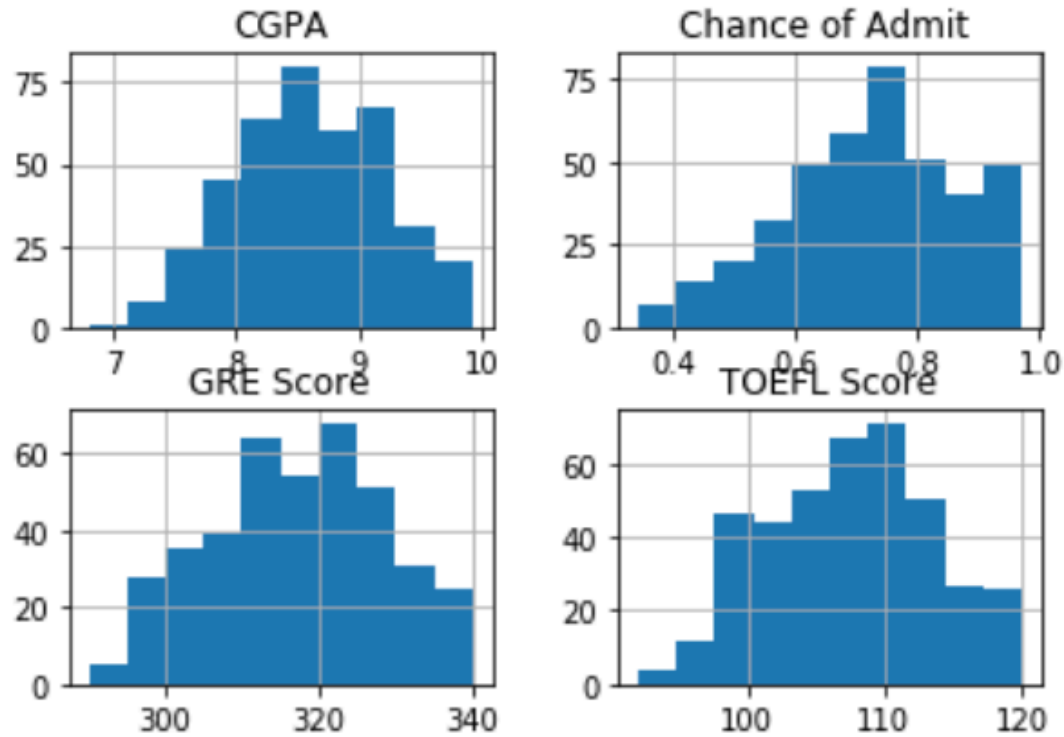
```
df.head()
```

	Serial No.	GRE Score	TOEFL Score	University Rating	SOP	LOR	CGPA	Research	Chance of Admit
0	1	337	118	4	4.5	4.5	9.65	1	0.92
1	2	324	107	4	4.0	4.5	8.87	1	0.76
2	3	316	104	3	3.0	3.5	8.00	1	0.72
3	4	322	110	3	3.5	2.5	8.67	1	0.80
4	5	314	103	2	2.0	3.0	8.21	0	0.65

DATA CLEANSING

- Test scores and GPA will be analyzed
- Only the columns GRE score, TOEFL score, cumulative GPA, and chance of admittance are kept.
- Cumulative GPA is out of 10, the chance of admittance is a percentage, GRE Score is out of 340, and TOEFL score is out of 120.

DATA SUMMARY

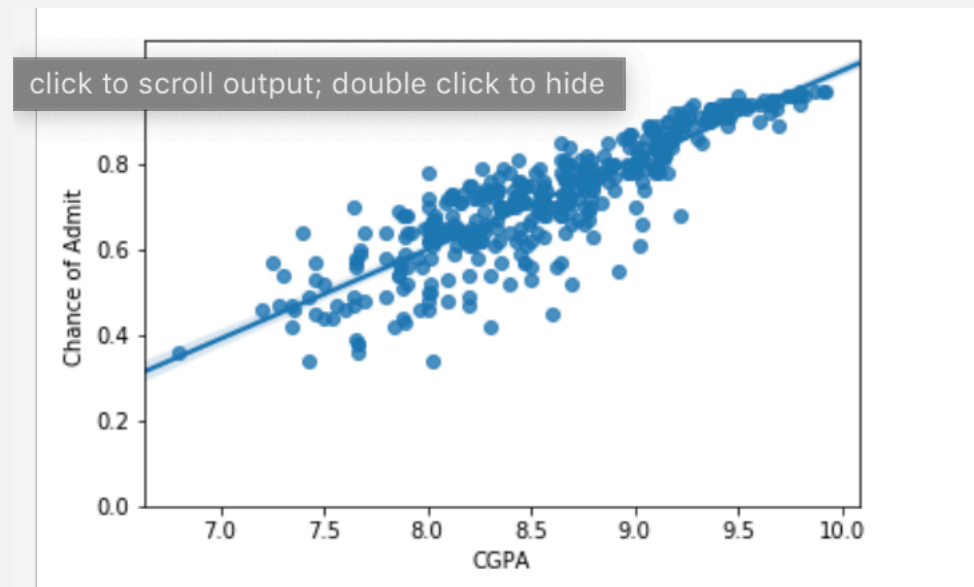


```
graph1.corr()
```

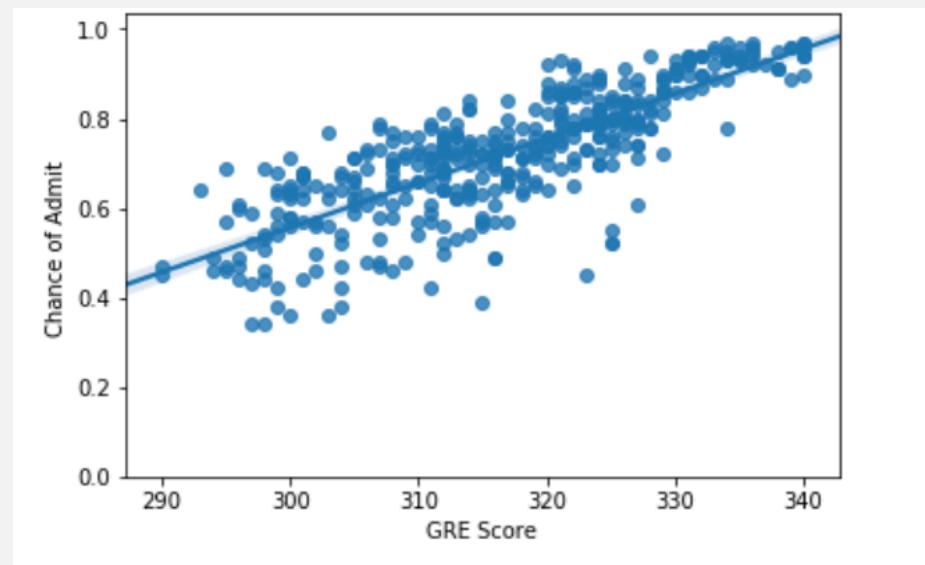
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	GRE Score	TOEFL Score	CGPA	Chance of Admit
GRE Score	1.000000	0.835977	0.833060	0.802610
TOEFL Score	0.835977	1.000000	0.828417	0.791594
CGPA	0.833060	0.828417	1.000000	0.873289
Chance of Admit	0.802610	0.791594	0.873289	1.000000

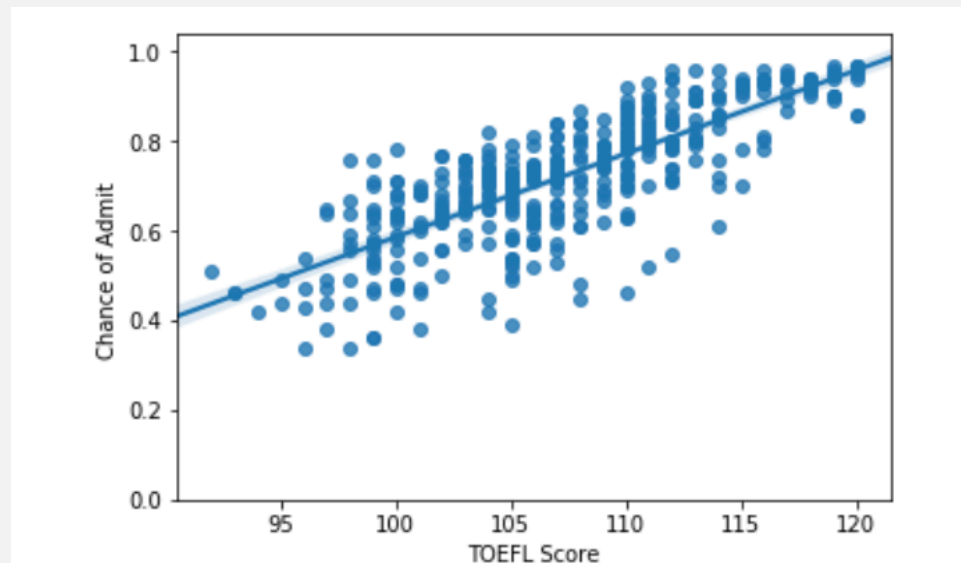
GPA VS CHANCE OF ADMITTANCE



GRE SCORE VS CHANCE OF ADMITTANCE

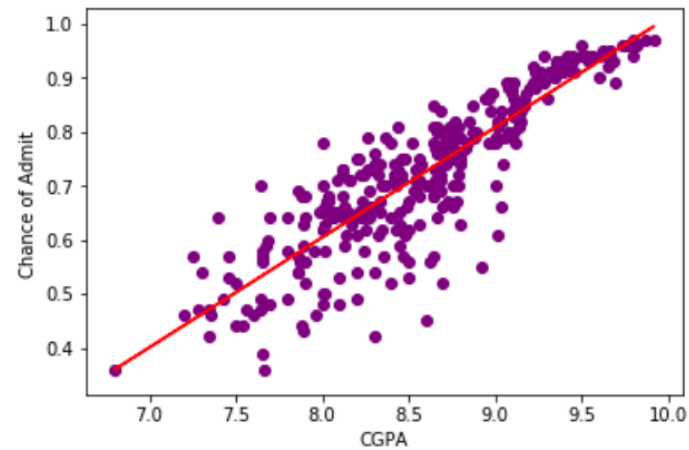


TOEFL SCORE VS CHANCE OF ADMITTANCE



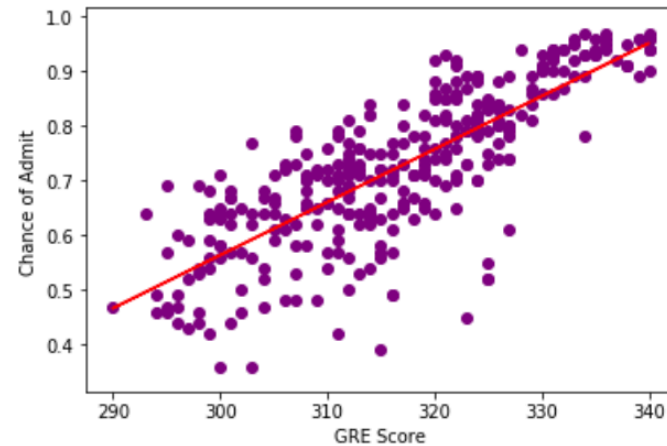
MODELLING: GPA VS CHANCE OF ADMITTANCE

```
Coefficients: [[ 0.20371613]]  
Intercept: [-1.02542191]  
Mean absolute error: 0.06  
Residual sum of squares (MSE): 0.01  
R2-score: 0.54
```



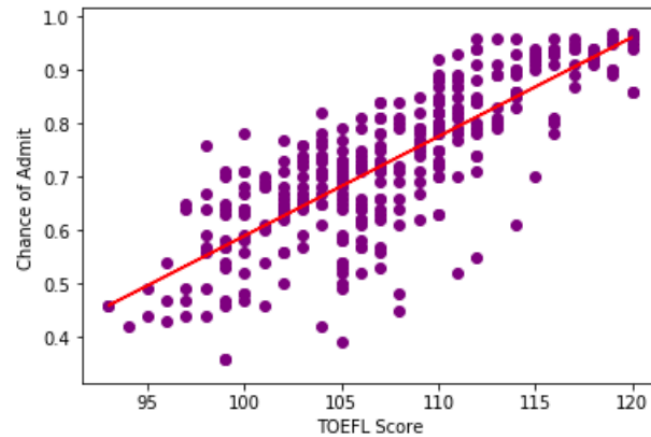
MODELLING: GRE SCORE VS CHANCE OF ADMITTANCE

```
Coefficients: [[ 0.00969772]]  
Intercept: [-2.34593557]  
Mean absolute error: 0.07  
Residual sum of squares (MSE): 0.01  
R2-score: 0.36
```



MODELLING: TOEFL SCORE VS CHANCE OF ADMITTANCE

```
Coefficients: [[ 0.01858974]]  
Intercept: [-1.26971426]  
Mean absolute error: 0.07  
Residual sum of squares (MSE): 0.01  
R2-score: 0.32
```



CONCLUSION

- Built a model to assess a students' qualifications regarding GPA and test scores