

The Northwestern University logo is a stylized 'N' composed of several overlapping triangles in various shades of purple, located on the left side of the slide.

Northwestern

Applicant Helper

Developer: Ziyang Wang

Motivation

This app was built to help students in shortlisting universities with their profiles and help them prepare their application:

- To give students an overview of the performance of Admitted vs Rejected students to help their long-term preparation
- To predict applicant's application result based on their current status to help them evaluate themselves and make future plans
- For those who get a “not admitted” prediction result, this app help them set a target score for their standard exams (GRE, TOEFL)

Demo

<http://18.219.124.31:3000/>

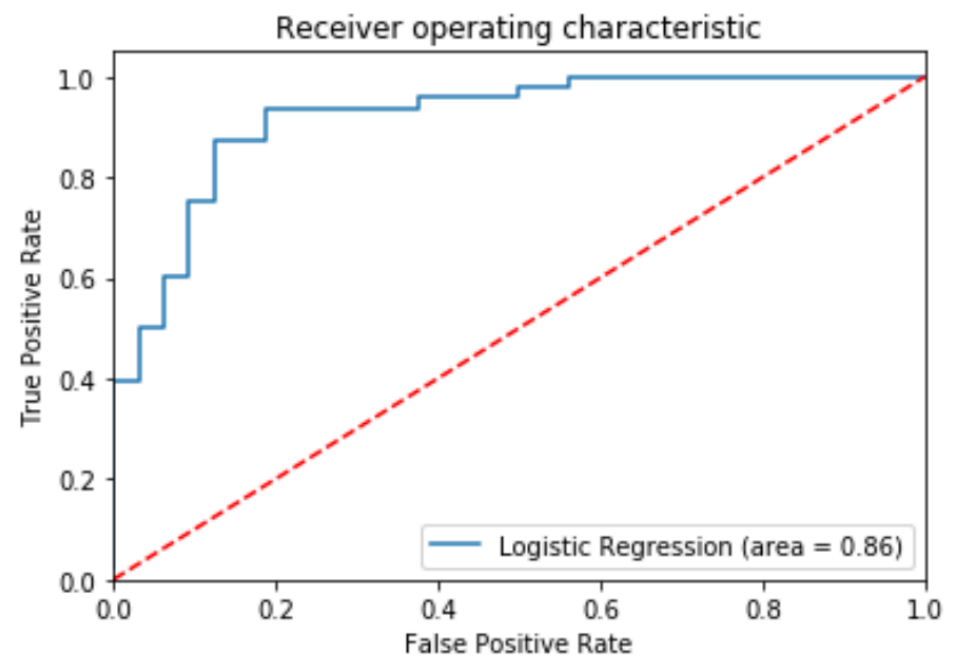
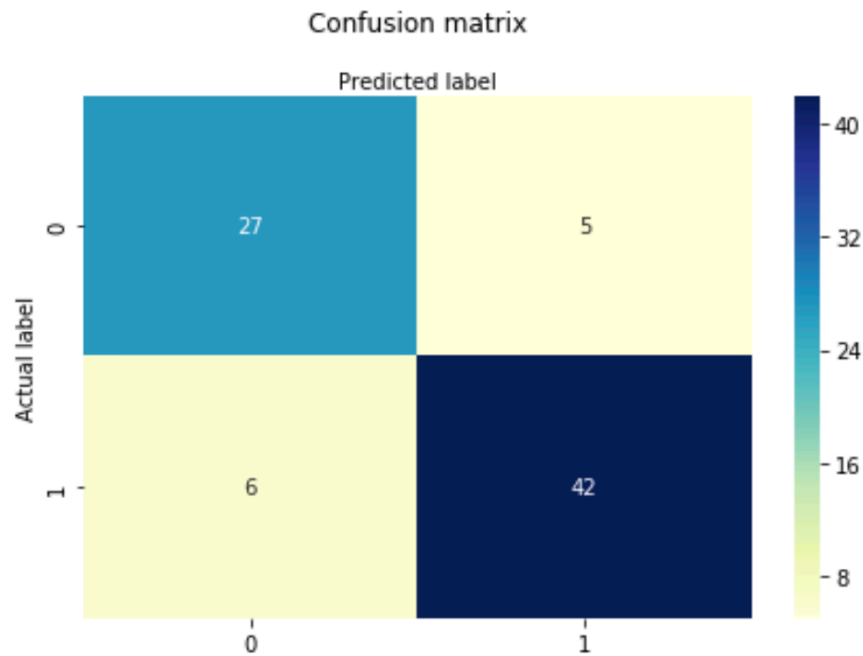
Data

- Obtained from *Kaggle*, owned by Mohan S Acharya.
- Included backgrounds and admission probabilities of 500 students
- Response: the chance of admission from a particular university
- Predictors:
 - GRE Score
 - TOEFL Score
 - University Ranking
 - SOP (Statement of Purpose)
 - CGPA (Cumulative Grade Point Average)
 - LOR (Letter of Recommendation)
 - Research Experience

Methodology

- Logistic Regression
 - Success Criterion: $AUC > 0.8$
 - Test Accuracy: 0.86
 - False Negative (predicted will be admitted but actually rejected) are more costly than false positive, since being rejected hurts students more and would cause worse impression for them towards this app
- Binary Search
 - Success Criteria: Substitute the specified subject score of the student, and the prediction result change from rejected (0) to admitted (1)

Evaluation



Insight

- Based on our model, we can see GRE has a large contribution to the application result. If students have limited time before submitting application, improving GRE score is probably a better choice.
- Comparing with University rating, cumulative GPA turns out to be more important for the admission result.
- Research Experience is relatively independent from other predictors, but its importance also is high. Thus, if a student wants to apply for graduate program, we highly recommend him or her to join a research project.

Thank You

Contact : Ziyang Wang

E-mail: ziyangwang2019@u.northwestern.edu

Github: <https://github.com/zionward>

Linkedin: <https://www.linkedin.com/in/ziyang-wang/>