



# UVA ADMISSIONS & STATS ANALYSIS

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## INTRODUCTION

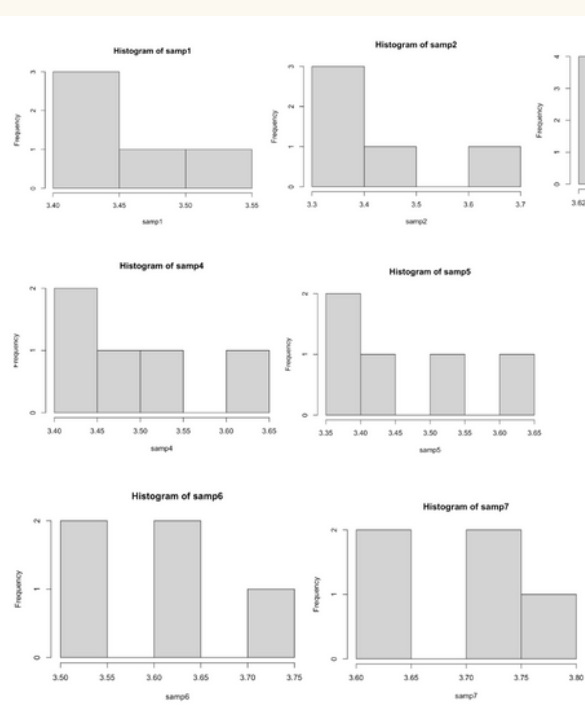
The University of Virginia consistently ranks high on U.S. News & World Report for colleges. For a prospective student, choosing a college to apply to and enroll in can be difficult. Often high school students review admissions stats and GPA when applying to understand their chances and the academic performance of students there.

UVA has a "work hard, play hard" environment. This project aims to provide prospective students insight into UVA's culture, which they may call home.

## DATA

This dataset is from UVA Institutional Research & Analytics. The site provides historical data on admissions, GPA, degrees awarded, employment, and tuition & fees for different academic schools, academic levels, gender, and race. [Check it out!](#)

## EDA



The data is small since we focus on stats from 2016-2022. Based on histograms, the data is not normal since it is skewed and heavy tailed. Therefore, nonparametric tests work best

## NONPARAMETRIC ANALYSIS

### QUESTION 1: WHAT IS THE AVERAGE NUMBER OF OFFERS 2016-2022?

With bootstrap analysis, we are 95% confident that the average number of offers that UVA admissions hands out to undergraduate students is between 9,336 and 9,935.

### QUESTION 2: WHAT IS THE AVERAGE NUMBER OF STUDENTS ENROLLED 2016-2022?

Using bootstrap analysis, we are 95% confident that the average number of enrollment is between 3,747 and 3,961

### QUESTION 3: DO FEMALE STUDENTS TEND TO HAVE HIGHER GPAS THAN MALE STUDENTS 2017-2021?

Based on the results of the Wilcoxon test, we got the p-value of 0.07. With an  $\alpha=0.1$ , we can conclude that on average, female students tend to have a higher GPA than male students.

### QUESTION 4: ARE THERE DIFFERENCES IN GPA BETWEEN SCHOOL PROGRAMS?

The Kruskal-Wallis test gave us a p-value of 0.0007, which is smaller than  $\alpha=0.1$ . Looking at Architecture, Arts & Sciences, Commerce, Education, Engineering, Leadership & Public Policy, and Nursing, there is a difference in GPA for the programs.

### QUESTION 5: IS THERE A DIFFERENCE IN GPA AT EACH ACADEMIC LEVEL?

Based on the Kruskal-Wallis test, there is no significant difference in GPA ranging from first year to fourth year. However, the Jonckheere-Terpstra test indicates that GPA does decrease from first year to fourth year.

## CONCLUSION

Wahoo! University of Virginia is home to many past and current students. Prospective students can gain insight into their future home with admissions and academic performance with:

- The average number of admissions offered is 9,336 and 9,935.
  - The number of admissions may decrease over time as UVA becomes increasingly competitive.
- The average number of enrollment is 3,747 and 3,961
  - More students may choose to accept their UVA offer due to its reputation
- Female students tend to have higher GPAs than male students
  - Though there are more female students enrolled, female students perform higher.
- There is a difference in GPA for different academic programs
  - Each school may have its own grading system and varying rigor across majors
- GPA decreases from first year to fourth year.
  - Major courses become more rigorous in level as the year progresses, which can lower GPA

## FUTURE WORK

Potential research:

- Graduation and retention rates
- Employment rate after graduation
- Tuition and fees

