Predicting New Grad's Salary

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Introduction

Many of us will be graduating this school year. Knowing this information could help you:

- Decide on a career choice

- Negotiate salary

- Set realistic expectations

Scientific Research Questions

1. What are the most significant predictors of salary for new college graduates?

2. How does the field of study affect salary outcomes for new college graduates?

Data Set

National Center for Science and Engineering Statistics

National Survey of College Graduates

106,279 original data points

Variables used:

- Salary
- Race/ethnicity (Asian, White, Multiple Race, Hispanic, Black, Native)
- Private/public institution (Private, Public)
- Year of start date (2021)
- Major (Engineering, Comp/Math Sciences, Physical Sciences, Social Sciences, Agriculture/Environmental Sciences, S&E-Related, Non-S&E Related)
- Grad year (2021)
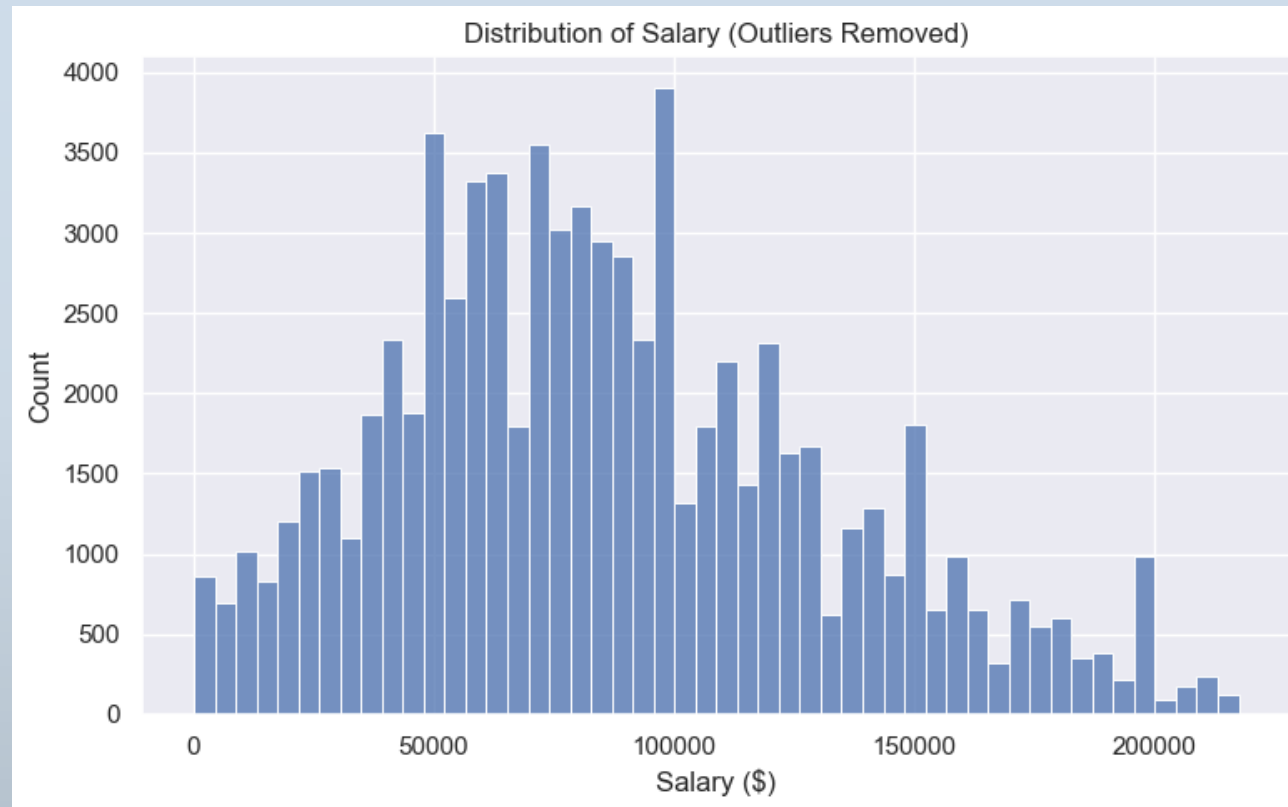- Gender (M/F)

Here is what we found…

This graph shows the distribution salary among recent graduates of 2021. Most students earn between $50,000 - $100,000.
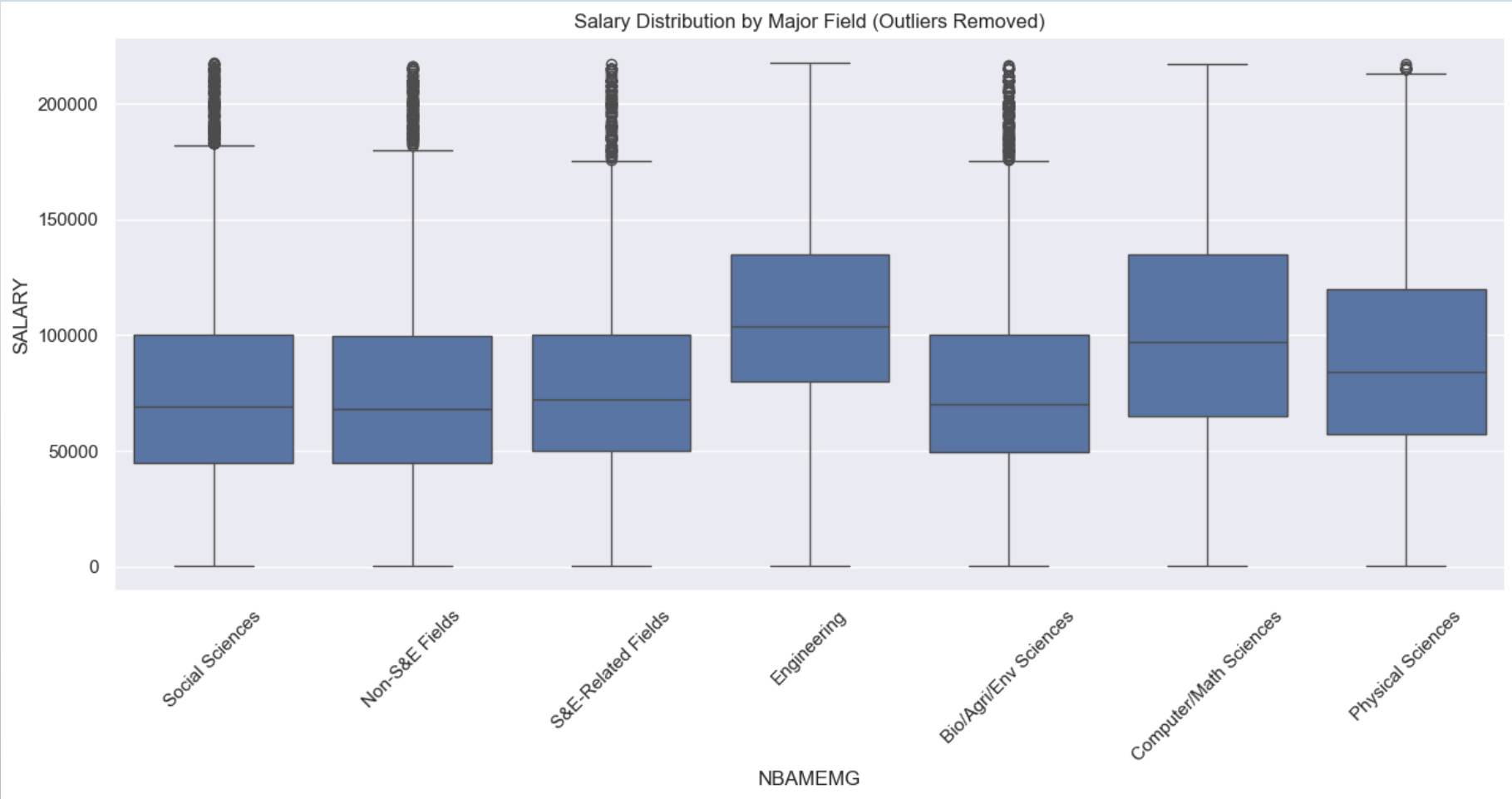
In this graph $63,512$ data points were used.

To filter our data, we found the IQR and removed points that fell outside of our range
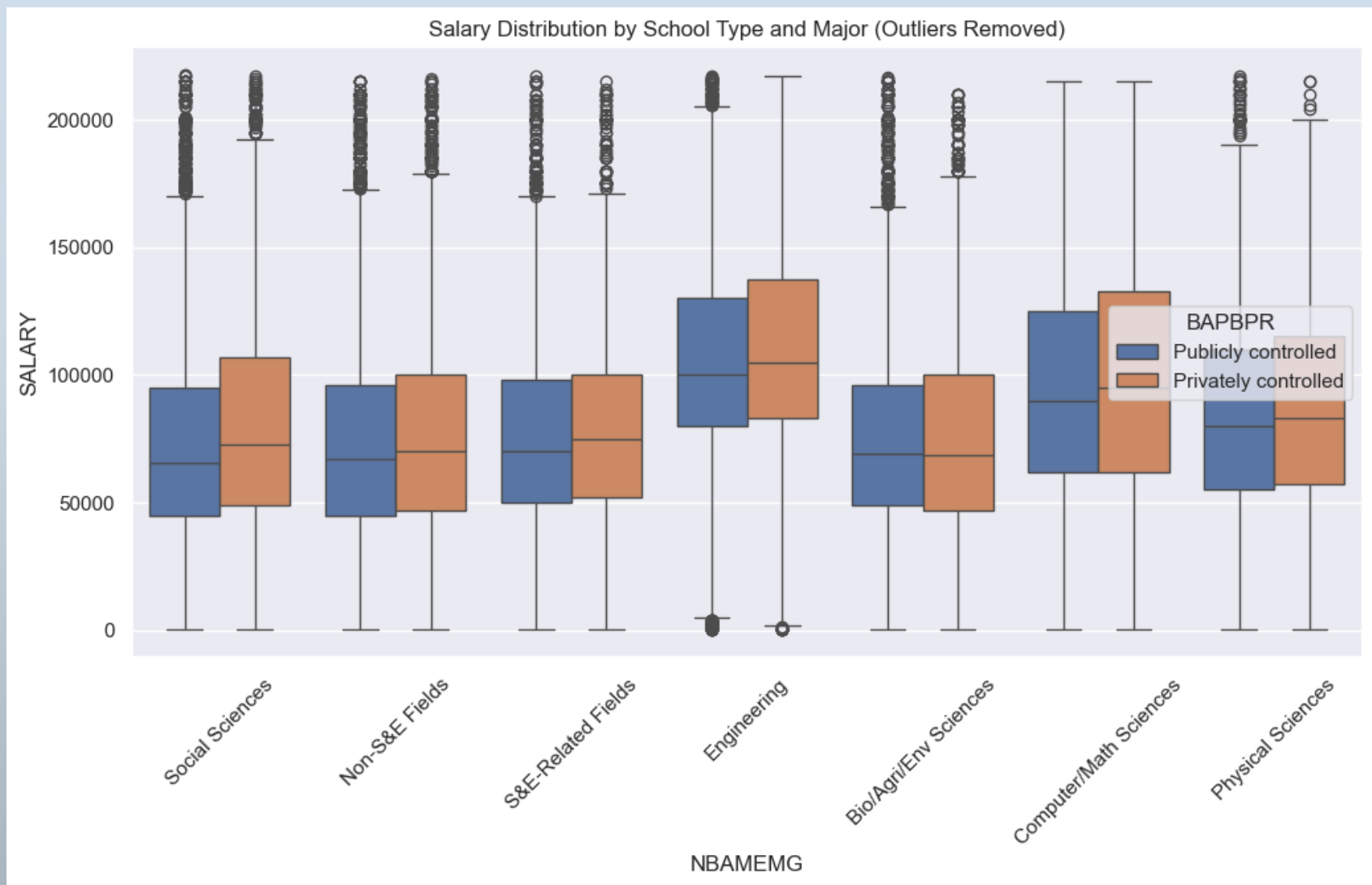
Upper bound: $Q3 + 1.5 * IQR$

Lower bound: $Q1 - 1.5 * IQR$

Distribution Across Different Majors

Salary Distribution by Major Field (Outliers Removed)

Private vs Public School / Major Field

Salary Distribution by School Type and Major (Outliers Removed)

Private vs Public School / Male vs Female

Salary Distribution by School Type and Gender (Outliers Removed)
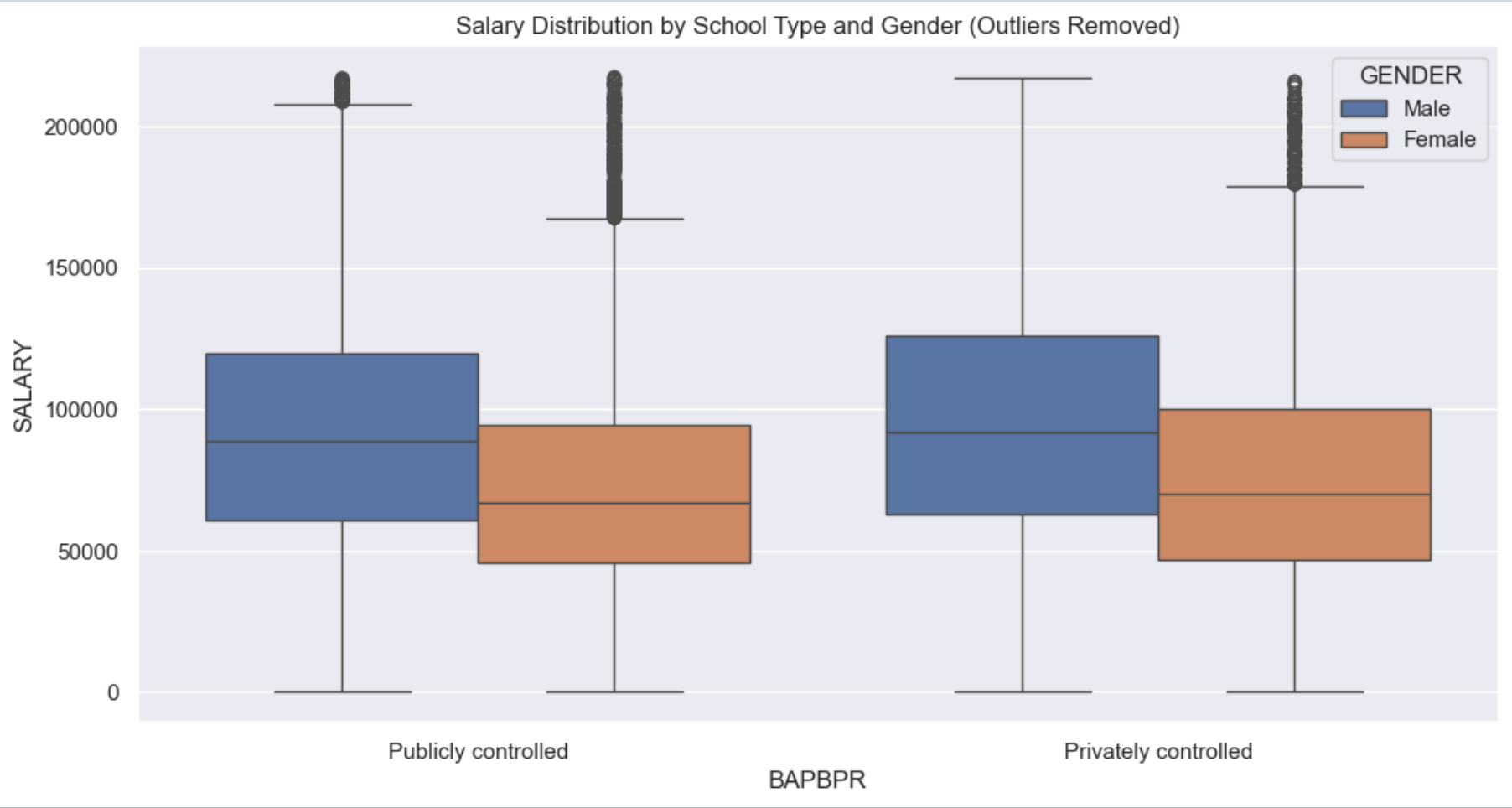
Computer&Math Sciences / Male vs Female
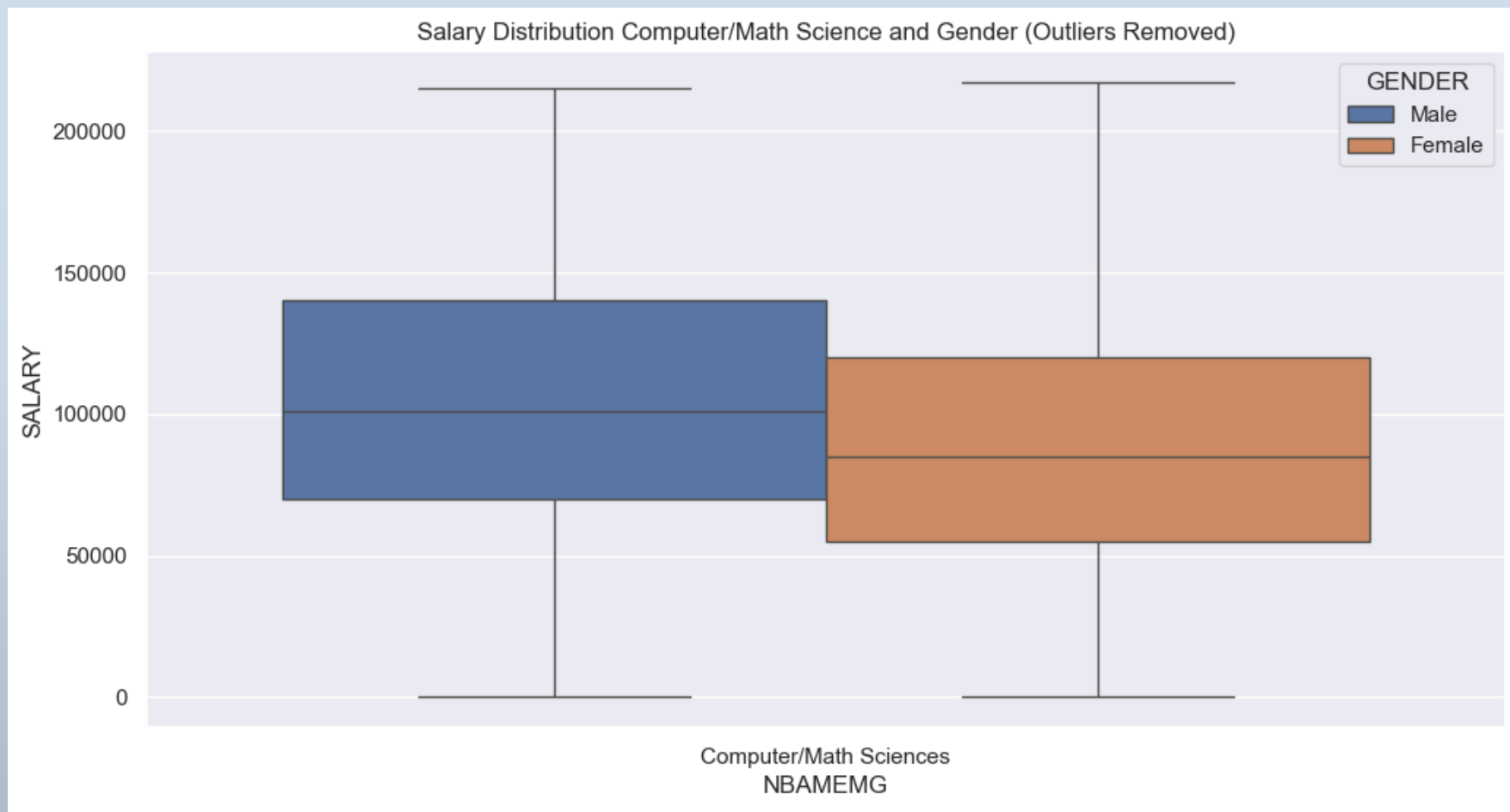
Findings Cont…

Median Salary by Major:

Major_Field

Engineering	101000.0
Computer/Math Sciences	91000.0
Physical Sciences	80000.0
S&E-Related Fields	71623.0
Bio/Agri/Env Sciences	69000.0
Non-S&E Fields	69000.0
Social Sciences	69000.0

Median Salary by Gender:

Gender (All Majors)

Male	90000.0
Female	68000.0

Median Salary by Gender:

Gender (Computer/Math Sciences)

Male	101000.0
Female	85000.0

Findings Cont…

Median Salary by School Type:

School_Type (All Majors)

Privately controlled   80000.0

Publicly controlled   79000.0

Median Salary by School Type:

School_Type (Computer/Math Sciences)

Privately controlled   95000.0

Publicly controlled   90000.0

Findings Cont…

Median Salary by Race/Ethnicity:

Race_Ethnicity (All Majors)

Asian, non-Hispanic	90000.0
White, non-Hispanic	80962.5
Native Hawaiian/Pacific Islander, non-Hispanic	80000.0
Multiple Race, non-Hispanic	75000.0
Hispanic, any race	70000.0
Black, non-Hispanic	65000.0
Native American /Alaska Native, non-Hispanic	60500.0

Median Salary by Race/Ethnicity:

Race_Ethnicity (Computer/Math Sciences)

Asian, non-Hispanic	108000.0
White, non-Hispanic	98262.0
Multiple Race, non-Hispanic	88500.0
Hispanic, any race	85000.0
Native Hawaiian/Pacific Islander, non-Hispanic	85000.0
Native Indian/Alaska Native, non-Hispanic	82500.0
Black, non-Hispanic	75000.0

Conclusion

According to our study, the median salary for a computer science student is $91,000.

We also found that women typically earn ~17% less than their male counterparts.

We found gender and major to be the best predictors of salary.

In our study we did not take into account geographical location of the students who participated in the survey.