Linear Regression

Andrew Barrios, Audrika Indu, Sivaranjani Kandasami, Alex Kendrick

2022-11-20

Introduction

The question for linear regression is what factors influence in-state tuition at U.S. universities. We will examine the factors influencing the total in-state tuition and fees for main campus, four year, degree granting insitutions.

Our primary response variable is `TUITIONFEE_IN` – the total tuition and fees for in-state students in US dollars.
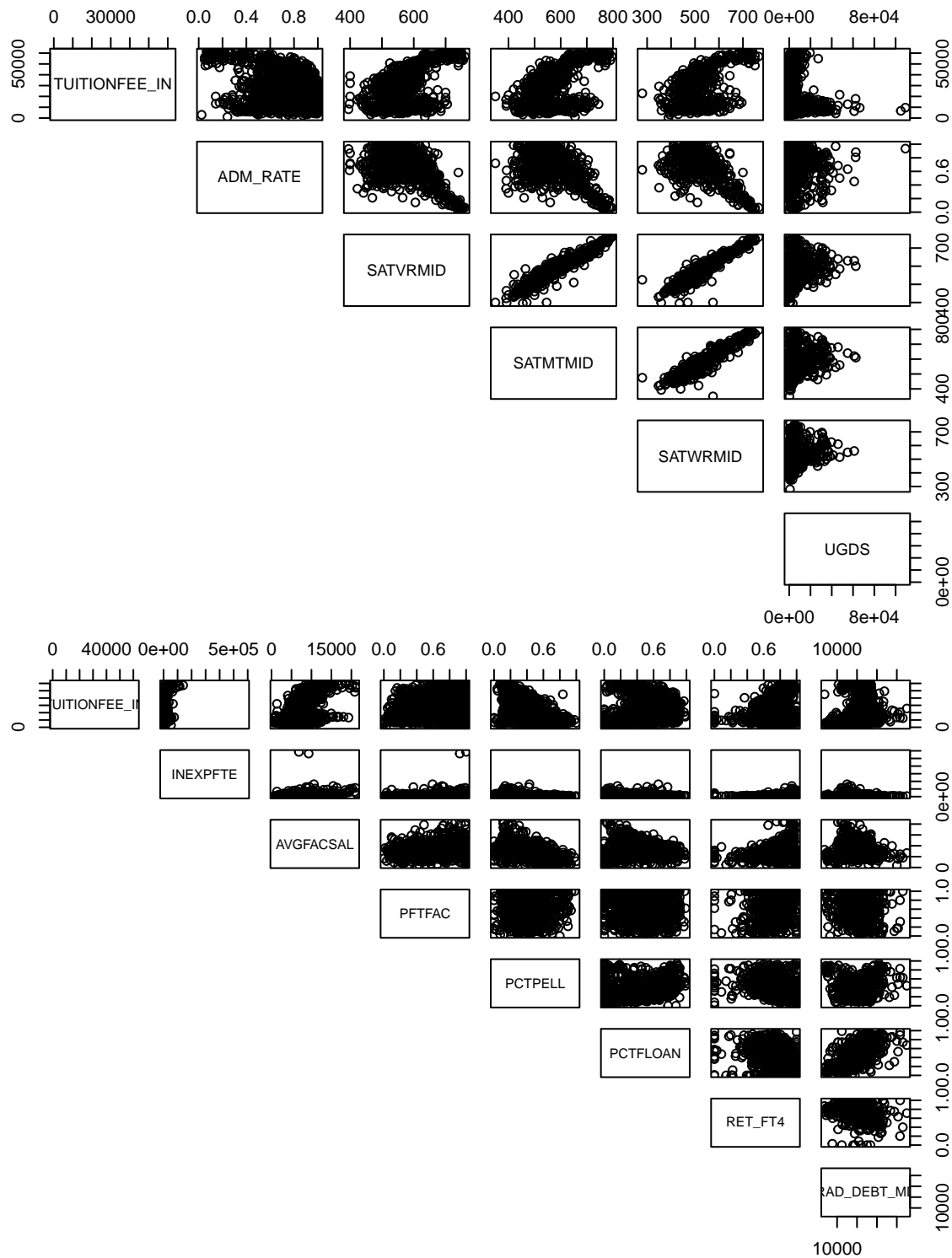
The cost of attending college is one of the main concerns for high school students planning for undergraduate studies. Tuition and fees have significantly increased over the past decade which resulted in increased student debts and an increase in student loans:

- Total $1.75 trillion in student loan debt (including federal and private loans)
- On average, each borrower owes $28,950
- About 92% of all student debt are federal student loans
- More than half (55%) of students from public four-year institutions had student loans
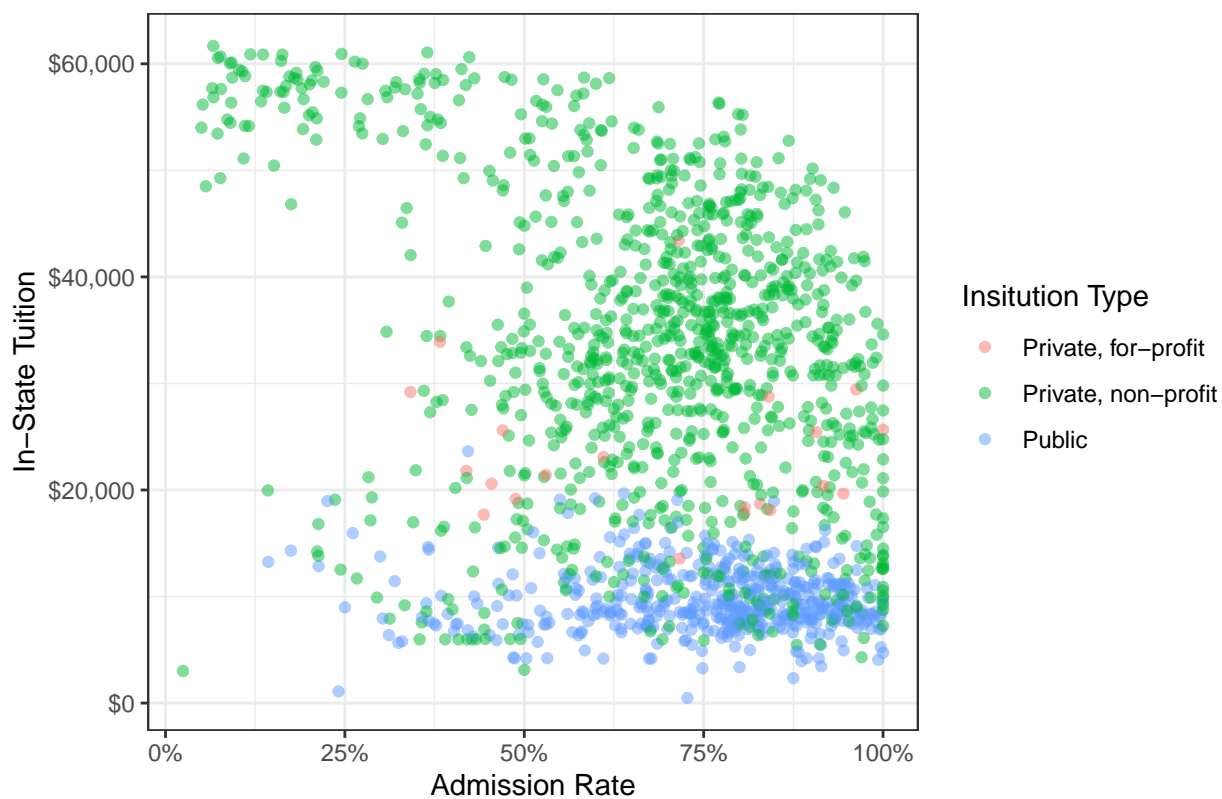
With the above facts, it is important that we understand the factors that influence high tuition fees. These factors that impact the fees needs to be addressed to encourage the current and future generations can have a debt-free college education of their choice.
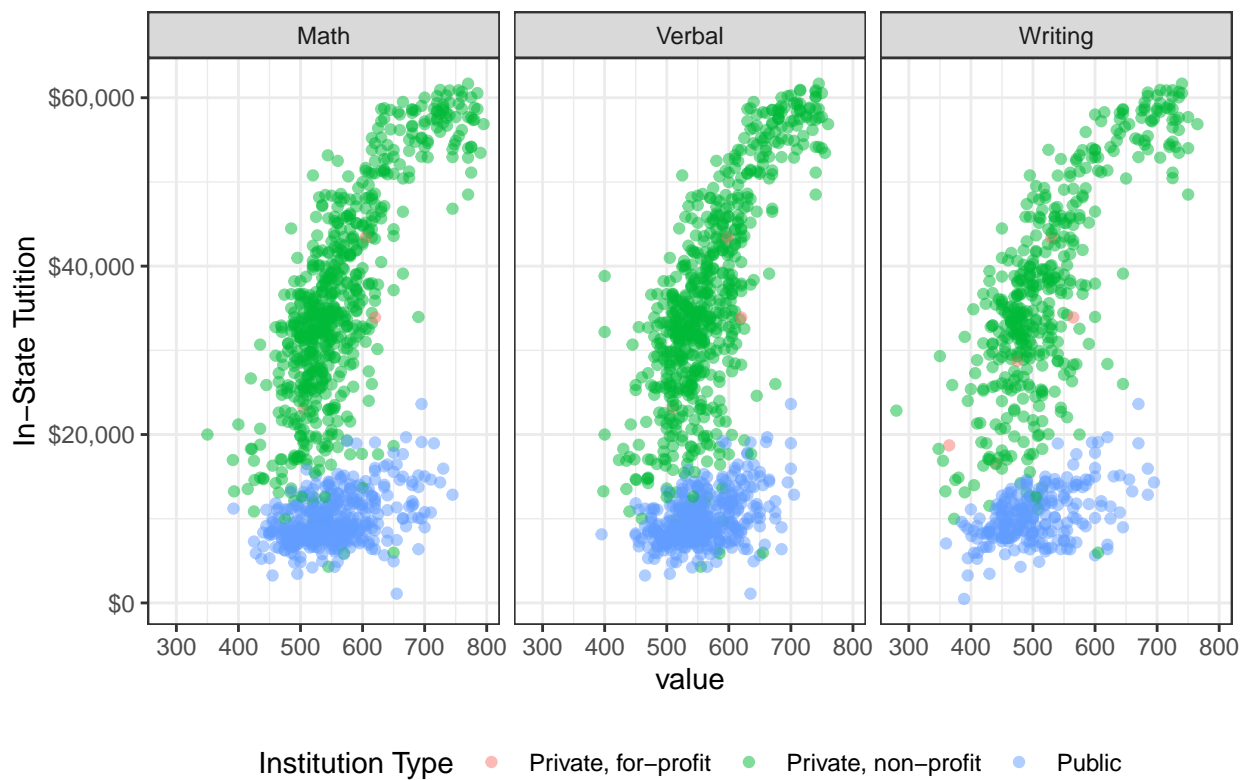
References: https://studentloanhero.com/featured/undergrad-worries-survey/ https://educationdata.org/student-loan-debt-crisis
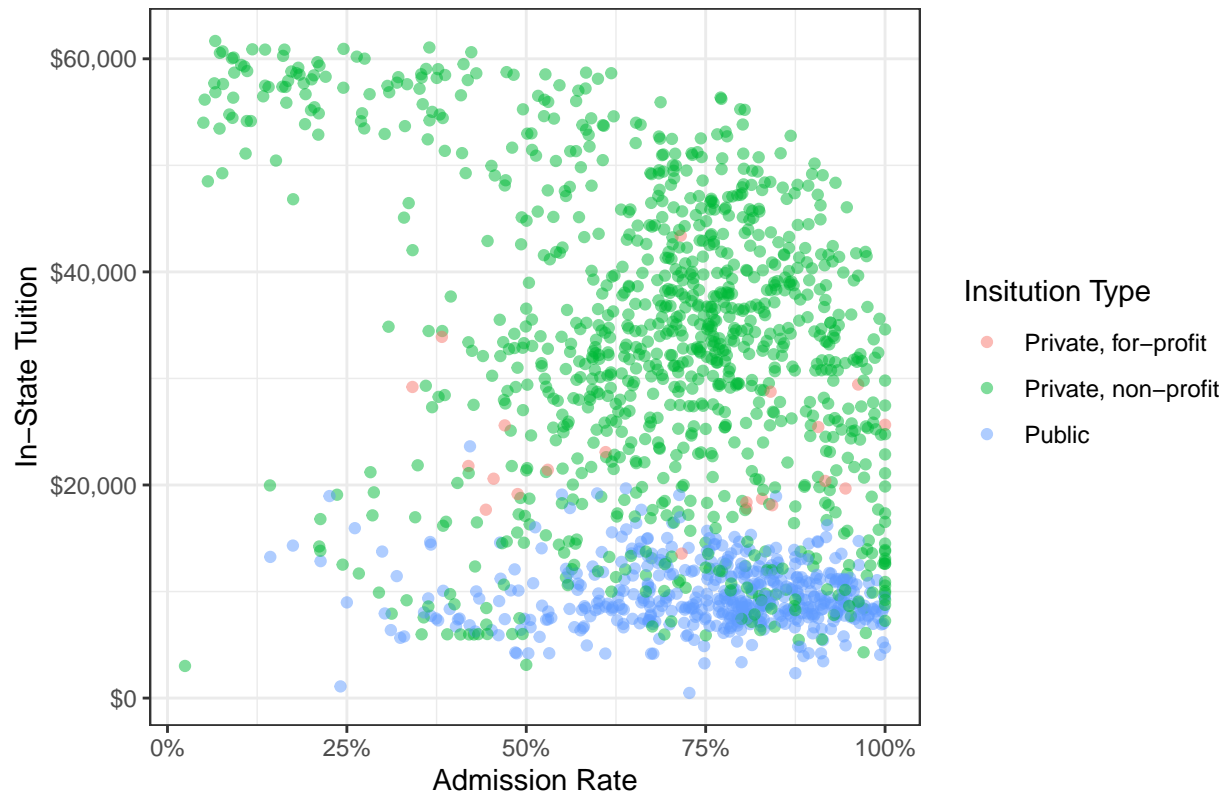
Data Visualizations
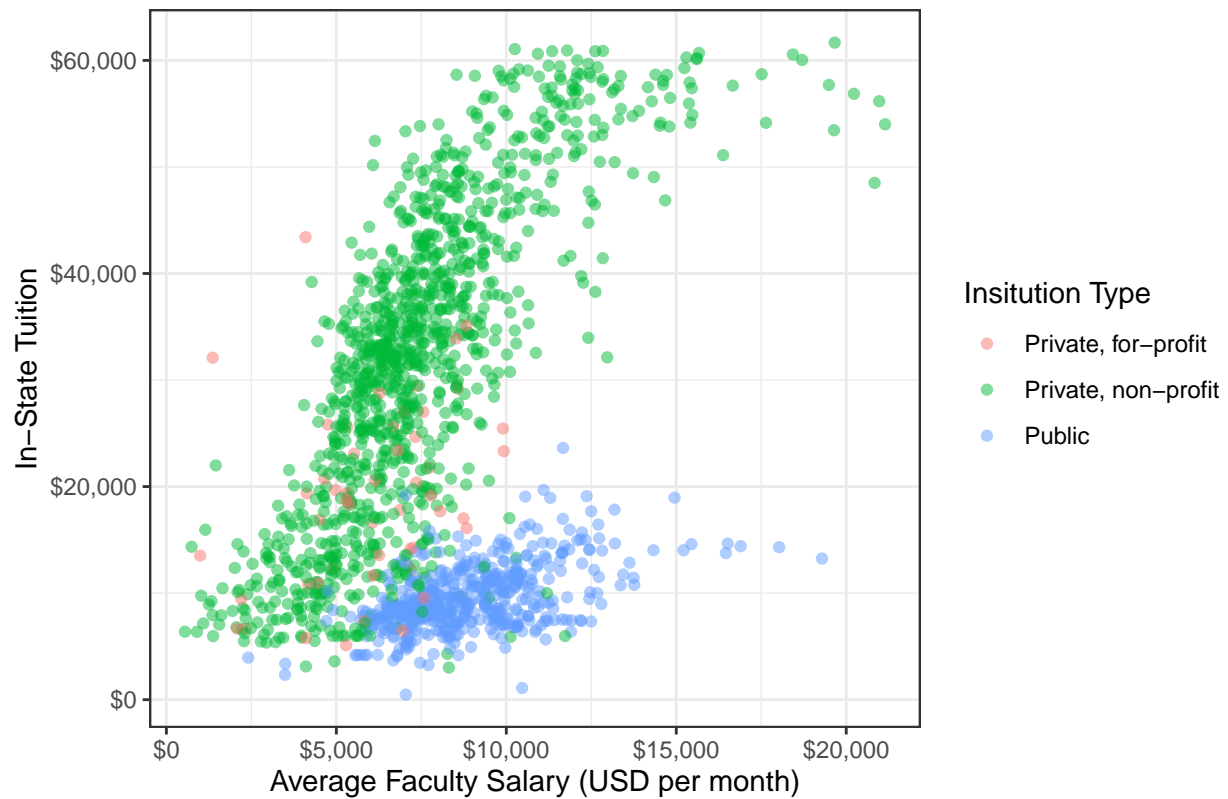
Admission Rate vs. Tuition and Insitution Type

Median SAT Score vs In−State Tuition by Insitution Type

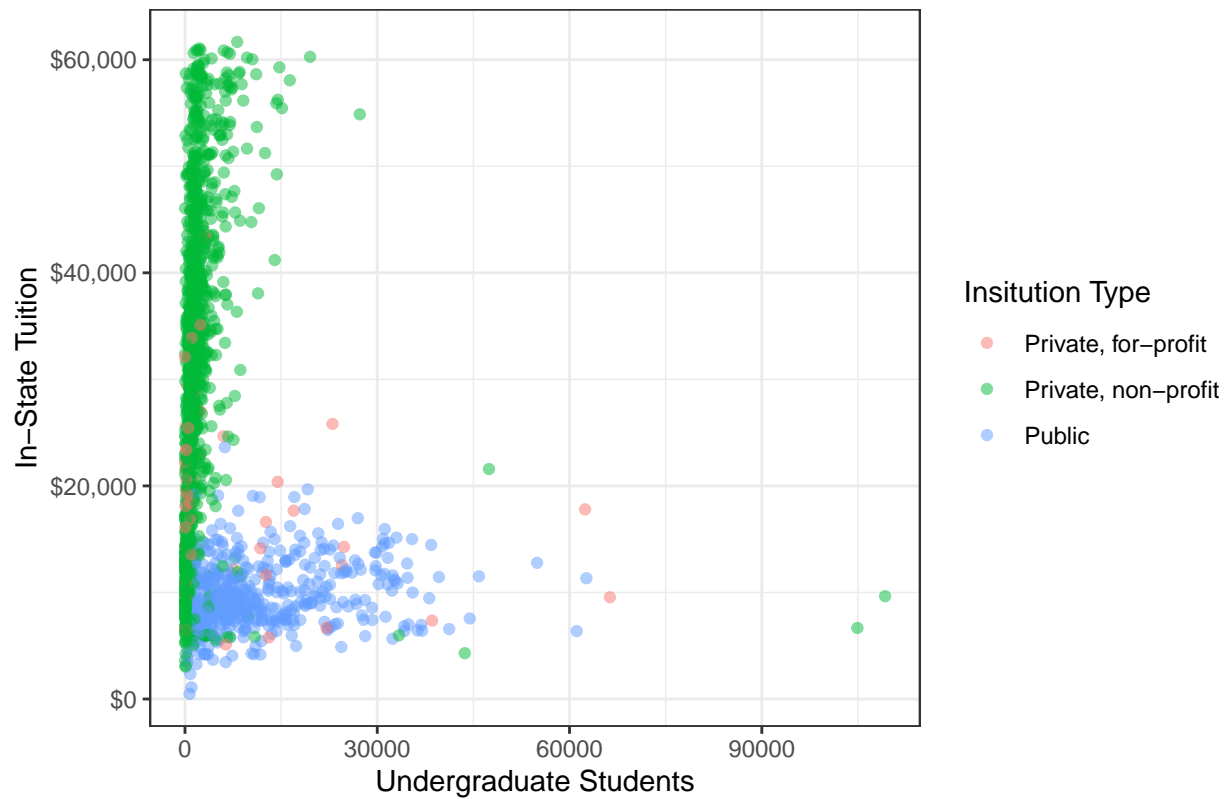**Admission Rate vs. Tuition and Insitution Type**

Tuition vs. Average Faculty Salary by Insitution Type

Tuition vs. Percentage Full Time Faculty

Tuition vs. Average Faculty Salary by Insitution Type

Model Building

Conclusions