University Case Study

Introduction

A famous US accreditation body wants to update norms considering tuition fees in their rating.

It seeks to understand what tuition fees depend on. Data concerns a sample of US universities.

Variables

Variables	Variable Description	Categories/levels
Name	University name	
Higher.degree	Highest degree offered	Doctor's degree research scholarship Doctor's degree research scholarship and professional practice Doctor's degree other Doctor's degree professional practice Master's degree Bachelor's degree
Type	Type of university	public, private not-for-profit
Total.applicants	Number of applicants	
Total.eligibles	Number of eligible students	
Total.qualified	Number of admitted students	
Tuition.fees	University tuition fees	
Total.students	Total number of students	

Questions

1. **Check the structure of the variables: are their type correct?**
2. **Describe quantitative variables using adequate tools. Comment. Do you have missing values? extreme values ? outliers ? Are the variables normally distributed?**
3. **Clean data if necessary.**
4. **Describe qualitative variables using adequate tools. Comment. Verify if the categories of qualitative variables have enough observations. If not recode the variable grouping similar categories or creating a category "other".**

5. **Create a new variable "Acceptance.rate". Describe the variable.**
6. **Are there relatively more private universities awarding doctorates? (table, graph and test)**
7. **Can we conclude that private universities have higher tuition fees ? (statistics, graph and test)**
8. **Can we conclude that tuition fees increase with the level of the highest degree offered? (table/test and graph)**
9. **Can we conclude that tuition fees decrease with the total number of students? (table/test and graph)**
10. **Can we conclude that tuition fees increase with the acceptance rate? (table/test and graph)**

Conclude