

UW 2010 - 2015 GPA Data

STAT 447 Final Project

Nicholas Wong (nwong27)

Sam Hwang (shwang62)

Akhil Gogineni (vg23)

Introduction

UW GPA Data From 2010 - 2015

- Dataset of class information for each class taught at University of Washington Seattle (UW) from Fall 2010 to Fall 2015
- Created a responsive web application (Shiny app) analyzing the dataset of course grades from 2010 - 2015 using the Shiny library

Purpose

UW GPA Data From 2010 - 2015

- To analyze the dataset of course grades from 2010 - 2015 at UW
- Particularly interested in the breakdown of the letter grading within each class
- Data anonymized and can be manipulated to highlight features important to current UW students
- Using our visualizations and this data, the user can discover which classes have a higher average GPA when stratified by year

Data

UW GPA Data From 2010 - 2015

- Comes from a Final Project students from UW worked on in a course they took called INFO 201: Technical Foundations of Informatics
- Dataset primarily divided up into 20 columns which consists of the Year, Quarter, Class, Title, Instructor, Student Count, Average GPA, and 13 columns for letter grades (A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F, and W)
- Decided to have the Shiny app be filtered mainly by 3 of these columns, which are the Class, Instructor, and Year
- Class conditionally dependent on the Year and the Instructor conditionally dependent on both the Class and Year

Interactive Features

UW GPA Data From 2010 - 2015

- Shiny app features several interactive components to aid in data visualization and analysis
 1. Dropdown Menus: Users can select the Year, Class, and Instructor from dropdown menus to filter the dataset accordingly
 2. Dynamic Plots: Upon selection, dynamic plots update to show the grades distribution for the selected class, including histograms and box plots
 3. Summary Statistics: A dynamic text output displays summary statistics like mean, median, and mode of the grades for the selected filters

Conclusion

UW GPA Data From 2010 - 2015

- Project allows UW students to better understand the grading patterns across different courses and instructors, potentially aiding in academic planning and course selection
- Using R Markdown and Shiny has enabled us to build a comprehensive, interactive tool which can evolve with further insights and data contributions

References

UW GPA Data From 2010 - 2015

- [University of Washington Seattle Grades Dataset from Info 201 Course Grades](#)
- [University of Washington Seattle: Standard Grading System](#)
- [UWgpa.csv Dataset](#)