Intermediate Progress

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Introduction

This project explores higher education data from U.S. colleges to uncover trends related to **admissions selectivity, student body diversity, and institutional outcomes** such as graduation rates. The goal is to build an interactive Shiny app to help users — such as students and parents compare colleges based on customizable filters like state, admission rates, SAT scores, demographics, and more.

Data Source - Most Recent Institution-Level Data

Data Cleaning

```
# Load data
data <- read.csv("https://raw.githubusercontent.com/khanhdo05/stats-final-230/refs/heads/main/Most-Recen
```

Feature 1

Users will be able to select an institution and view its racial composition through a Plotly pie chart, using variables like `UGDS_WHITE`, `UGDS_BLACK`, `UGDS_HISP`, `UGDS_ASIAN`, and more. The chart will display raw percentages when hovering over each slice, giving a quick and clear breakdown of the student body.

Feature 2

The app will feature sliders for SAT average and admission rate, along with filters for state and institution `CONTROL` type (Public = 1, Private = 2 or 3). Based on the user's selections, the app will return a list of colleges that meet the criteria. These results will be displayed in a clickable word cloud; clicking on a school's name will redirect the user to the college's official website

Feature 3

The app will include a plot that allows users to filter colleges based on median student debt, median earnings, undergraduate enrollment, admission rate, and ACT average (calculated from subject scores using data manipulation). After selecting a college of interest, the app will use clustering techniques to identify and visualize similar institutions, helping users explore comparable schools based on these key financial and academic attributes.