

# EXPLORATION 5: REVIEWING A DATASET

CODE 123: Research & Systems Thinking



## Overview

Datasets are not just neutral collections of numbers; they are shaped by the people who create, structure, and use them. Understanding the origins, structure, and potential biases of a data set is crucial for producing accurate and critical analyses.

In this assignment, you will evaluate a data set, explore its descriptive statistics using Excel, and consider the implications of how the data was collected.

## Assignment Requirements

### Part 1. Access the Data

**Step 1:** Navigate to this link [IPEDS SIUE Specific Data](#) (navigate on the page to a specific section, e.g., Enrollment, Graduation Rates, Financial Aid, depending on your investigation interests) & click the download data button (example of this button shown below in purple)

#### Percentile test scores of first-time degree/certificate-seeking undergraduate students: Fall 2024

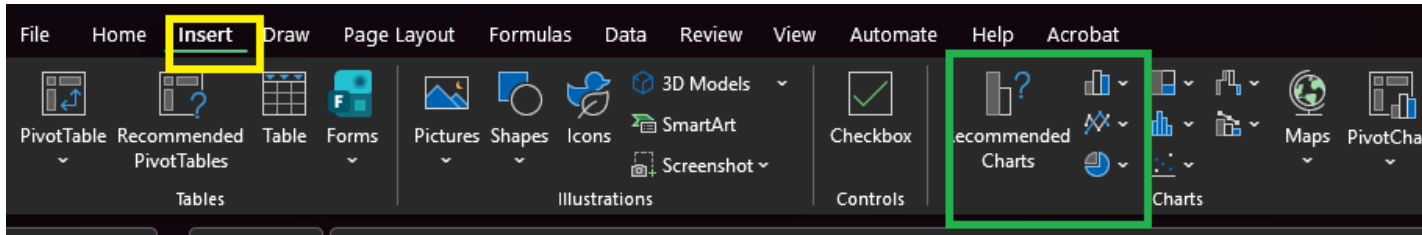
Chart | Table | Switch rows and columns | Download chart | **Download data**

**Step 2:** Locate the downloaded file in your browser's 'Downloads' folder and open it using Microsoft Excel in your browser or on your desktop, in the upper-right corner of the webpage. After downloading the file, open it by clicking on it.

**Step 3:** Highlight the section of data you want to convert to a chart by dragging your cursor over those cells in Excel. *(Ensure you only highlight cells containing numerical data and corresponding labels. Avoid including page titles or footnotes.)*

Cost of attendance for full-time, first-time, degree/certificate-seeking undergraduates: Academic year 2024-25	
	Cost of attendance
Published tuition and required fees	12,922
Books and supplies	1,006
On-campus food and housing	14,490
On-campus other expenses	4,844
Off-campus (not with family) food and housing	14,490
Off-campus (not with family) other expenses	4,844
Off-campus (with family) food and housing	14,490
Off-campus (with family) other expenses	4,844

- Now click 'Insert' on the top of excel, and click on a type of chart that you'd like to display



**Step 4:** Double-check. Once you insert that chart, you should see an image that looks similar to the one that exists on the IPEDS data page if you chose the same type of chart.

**Step 5:** Take a screenshot of that chart you created, and then identify the mean of your chosen data. To do this, click the box in Excel where you want the number to be displayed and type =AVERAGE(Letter#: Letter#) and press the ENTER key. For example, if your data is in cells B10 through B27, you would type =AVERAGE(10:B27). The mean should show up in that box. See the image below for an example.

	B	C	D
	<b>Average amount of aid awarded</b>		
<b>Degree/certificate-seeking undergraduate students</b>			
Any grant or scholarship aid	9,969		
Pell grants	5,689		
Federal student loans	6,262		
<b>Non-degree/non-certificate-seeking undergraduate students</b>			
Any grant or scholarship aid	6,559		
Pell grants	3,698		
Federal student loans			
<b>Full-time, first-time, degree/certificate-seeking undergraduate students</b>			
Any student financial aid			
Grants or scholarship aid	11,602		
Federal grants	6,028		
Pell grants	6,059		
Other federal grants	1,479		
State or local grants and scholarships	7,771		
Institutional grants and scholarships	5,414		
Student loan aid	7,101		
Federal student loans	4,872		
Other student loans	13,683		
	<b>6,870</b>		

## Part 2. Data Set Profile

**Check out this website and look for the “Survey Methodology” information:**

<https://nces.ed.gov/ipeds/survey-components/ipeds-survey-methodology>

Provide a total response of approximately 200 words that addresses all of the following questions.

- Who is credited as the creator and/or contributor(s) of this data set? Is it a government body, a university office, or a third-party company?
  - [About IPEDS](#)
- Why did they create or compile the data? Is it for marketing, for legal compliance, or for internal tracking?
- Have the creators described their data cleaning process anywhere? What effect might their choices have on the data?
  - [IPEDS Survey Methodology](#)

- How might the creators' identities and goals have shaped the data, either intentionally or inadvertently?
- What could you use this data for?

## Reflection (Approx. 200 Words)

Write a reflection on the process of analyzing your dataset:

- **Potential Biases:** How might the creators' goals (identified in part 2) have shaped the data? (example: if the university wants to seem diverse, how might they present the data?)
- **Missing Data:** Whose story is not told in the data? Are any groups or variables missing?
- **Usability:** How difficult was it to turn this raw data into a clear answer?

## Submission Details

- Submit one document (Word or PDF) that includes your written Data Profile, the screenshot of your Excel chart, and your reflection to Bb or ePortfolio by Feb X at XX PM
- Select sections to add to evidence of your goals in ePortfolio.

**Grading Criteria:** Ensure your report is well-organized, clearly written, and demonstrates thoughtful engagement with the data. If you have any questions, reach out for guidance early!

<b>Exemplary (E)</b>	Demonstrates deep critical thinking and thorough analysis; visualizations are clear, labeled, and accurate; reflection connects data structure to real-world implications.
<b>Meets Expectations (M)</b>	Addresses all components (Profile, Stats, Reflection); adequate analysis and reflection
<b>Revise (R)</b>	Missing one of the three required components, and/or the analysis contains significant misunderstandings of the data.
<b>Needs Improvement (N)</b>	Lacks critical engagement and/or assignment is incomplete.