CSC/SDS 109: Communicating with Data

# HW 02: First Tableau Visualizations

This is a pair assignment! Individual submissions must be pre-approved.

**Goals:**

* **Work with real data**
* **Use Tableau to visualize data**

## Instructions

Choose Data

Choose one of the datasets under the “In-class” tab on the course website:

**\*\*Use the dataset on the course website – they’ve been cleaned for you**

* College.csv (source: <https://www.kaggle.com/datasets/yashgpt/us-college-data>)
* cereal.csv (source: <https://perso.telecom-paristech.fr/eagan/class/igr204/datasets>)
* palmerpenguins.csv (source: <https://allisonhorst.github.io/palmerpenguins/articles/intro.html>)
* bluebikes-tripdata\_sm.xlsx (source: <https://data.boston.gov/dataset/blue-bikes-system-data>)

Deliverables

Research the dataset you chose. You may need to do additional research beyond clicking the source link above. Answer the questions in the attached worksheet about your dataset.

Load the dataset into Tableau and explore it. For example, if you download the cereal dataset, you'll see something like this:

**A screenshot of a computer

AI-generated content may be incorrect.**

Using Tableau, create three DIFFERENT visualizations that each show something interesting in your data. Each visualization must:

* Show unique variables of the dataset (i.e. not the same as your other two visualizations)
* Be a unique visual encoding (i.e. not the same as your other two visualizations)
* Include:
  + Descriptive title
  + Readable axis titles
  + Readable axis labels
  + A legend when necessary
  + Zero double encodings
  + Appropriate data-visual mappings

Save each of your visualizations as a .png (use Export Image then Save As png). For each visualization, add the PNG to the attached worksheet and answer the questions that follow.

## Submission

Submit your deliverable(s) as a PDF on Gradescope. If you worked with a partner, submit as a group (<https://guides.gradescope.com/hc/en-us/articles/21863861823373-Adding-Group-Members-to-a-Submission>).

## Rubric

The following matches the rubric you will see on Gradescope.

|  |  |  |
| --- | --- | --- |
|  | Points | Criteria |
| General: | 0.5 | Raw data collector |
|  | 0.5 | Raw data collection time |
|  | 0.5 | Raw data observations |
|  | 0.5 | Raw data variables |
|  | 1 | Raw data biases |
| For each visualization: | 1 | PNG |
|  | 1 | Unique dimensions |
|  | 1 | Unique visual encoding |
|  | 1 | Descriptive title |
|  | 1 | Readable & descriptive axis titles |
|  | 0.5 | Readable axis labels |
|  | 0.5 | Legend if necessary |
|  | 1 | Zero double encodings |
|  | 1 | Appropriate data-visual mappings |
|  | 1 | Description of interesting trend |
| TOTAL | 30 |  |

*SDS/CSC 109 hw02 Worksheet*

Fill out this worksheet with respect to the dataset you chose.

*Data Investigation*

### Who collected the raw data?

### When was the raw data collected?

### What does one observation (row) in the raw data represent?

### What variables (columns) are in the raw data?

### What biases are present in the raw data?

Fill out this worksheet with your three visualizations.

*Visualization 1*

### Add your png.

### What is the data 🡪 visual mapping in the visualization?

### Describe one interesting trend shown in the visualization.

*Visualization 2*

### Add your png.

### What is the data 🡪 visual mapping in the visualization?

### Describe one interesting trend shown in the visualization.

*Visualization 3*

### Add your png.

### What is the data 🡪 visual mapping in the visualization?

### Describe one interesting trend shown in the visualization.