You pursue two objectives with the individual project:

1. **Replicate and redesign an existing data product**. This will allow you to learn from others, sharpen your critical perspective on data visualizations, reason about design decisions, and attempt to improve data visualizations.
2. **Develop a deceptive data product**. This will allow you to sharpen your skills in detecting intentional and unintentional distortions to the data (**You may not alter the data when developing your deceptive data product.**).

The topic for the individual project is **Gun Violence in the United States**. We use the following data product: <https://www.vox.com/policy-and-politics/2017/10/2/16399418/us-gun-violence-statistics-maps-charts> (A PDF version is on [Camino](https://camino.instructure.com/courses/40577/files?preview=2095796) in case the website becomes unavailable or changes significantly).

The following table provides an overview of the deliverables for the individual project.

The problem statement should outline your initial (and perhaps intuitive) analysis of the data product. Think about the following questions:

* What does the literature tell you about the topic?
* Where and why is the data product (in)effective?
* What is your proposal to redesign the data product?
* What are potential starting points for a deceptive version and why are they deceptive?
* Have you obtained access to the mentioned data sources or identified replacements/potentially important additions?

I will evaluate your problem statement based on the following criteria.

| **Criteria** | **Metrics** | **Max. Points** |
| --- | --- | --- |
| Content | Understandability (0.5), Completeness (0.5) | 1 |
| Persuasiveness | Clarity (1), Argumentation (1) | 2 |
| Evidence | Sources (1) | 1 |
| Style | Professionality (0.5), Originality (0.5) | 1 |
| **Total** |  | **5** |

**Article 1 – Summary**

Might take possible points from this article

*Project the idea that you’re showing a reflection of human activity, of things people did to make a line go up and down*

*When should I use a bar chart? How many colors are too many? Where should the key go? Do I have to start my y‑axis at zero? Visual grammar is important and useful—but knowing it doesn’t guarantee that you’ll make good charts.*

*What is your execution strategy?*

You can write on class reader assignment

Read articles online on what makes a good data product effective/ineffective?

How to evaluate a data visualization product?

Starting points/How to start/What to look for?

Read up introduction chapters of the book? And summarize?

Fundamental Question

Who is the target audience for this data product?

What, why and how?

Datasets/Information used?

Bar graphs, pie-charts and tools used?

Instead, first think about what you’re representing—ideas or data? Then consider your purpose: Do you want to inform, persuade, or explore?

**Topic - America’s unique gun violence problem, explained in 17 maps and charts**

**Questions Problem Statement:**

**What does the literature tell you about the topic?**

The literature states that gun violence is a unique problem to US by the help of a video.

The article uses 17 points in order to persuade the article readers (elaborate more on article readers) that America’s gun violence problem is unique to America. The visualization first gives a few key statistical facts about the scenario and impact of gun violence in US. Later it also tries to reason out why gun vio

The article states that gun violence problem is a unique problem to US with the help of a video.

Video excerpt: Summarize the video

The following points with the help of maps and charts explains America’s gun violence problems compared to other countries, why it happens and why it’s such a tough problem to fix.

1) America has six times as many firearm homicides as Canada, and nearly 16 times as many as Germany **– situation fact**

2) America has 4.4 percent of the world’s population, but almost half of the civilian-owned guns around the world **– situation fact**

3) There have been more than 1,600 mass shootings since Sandy Hook **– situation fact**

4) On average, there is around one mass shooting for each day in America **– situation fact**

5) States with more guns have more gun deaths **– possible reason**

6) It’s not just the US: Developed countries with more guns also have more gun deaths **– situation about other countries**

7) America is an outlier when it comes to gun deaths, but not overall crime **– unique situation**

8) States with tighter gun control laws have fewer gun-related deaths **– support argument for possible reason**

9) Still, gun homicides (like all homicides) have declined over the past couple decades **– fact**

10) Most gun deaths are suicides **– additional support argument**

11) The states with the most guns report the most suicides **– support argument for possible reason**

12) Guns allow people to kill themselves much more easily **– support argument for possible reason**

13) Policies that limit access to guns have decreased suicides **– support argument for possible reason**

14) In states with more guns, more police officers are also killed on duty **– other fact**

15) Support for gun ownership has sharply increased since the early 2000s **– increasing issue**

16) High-profile shootings don’t appear to lead to more support for gun control in the long term **– indirect strong argument for possible reason**

17) Specific gun control policies are fairly popular **– weak argument but supportive for possible reason.**

**Questions Problem Statement:**

**What does the literature tell you about the topic?**

**Where and why is the data product (in)effective?**

**What is your proposal to redesign the data product?**

**What are potential starting points for a deceptive version and why are they deceptive?**

**Have you obtained access to the mentioned data sources or identified replacements/potentially important additions?**

The literature topic is America’s has a unique gun problem. The argument given here is that gun problem in America is larger and much more complicated that other developed countries.

The article starts off with a video comparing America has a larger gun violence problem than other countries. It then also explains the same point with the help of more charts and graphs giving a detailed explanation of the comparison. It also entails the frequency of this violence over a time trend which adds a support to the argument. The leaders speaking about the gun violence problem sets the mood of the viewers giving them a sense of the gravity of the situation is larger and complicated. The video then states what are the possible reasons of the gun violence. One main reason is that more guns in country the more deaths – mostly homicide and suicides as compared to other developed countries.

The literature has 17 maps and charts what the violence looks like as compared to the rest of the world, the reasons behind it and why it is difficult to fix. The usage of maps and charts were highly effective such as the direct correlation of gun ownership and gun deaths is concise and effective and communicates the message directly. Also reiterating similar point as more guns more suicides chart is also straight forward and effective.

The maps and charts used that shows an impact of gun violence could have been be more concise and effective. Since the topic deals with death and violence use of red color in several maps and charts makes the visualization deceptive and ineffective. At some places numbers could be used instead of percentages. The use of calendar showing each day a mass shooting is highly misleading since there are a lot of days which represented as 0 which means no shooting.

The last 3 charts shown such as more police killed on duty with higher guns and information about gun ownership laws failed to make an impact along with the literature topic. Because it simply showed even if the higher mass shooting around 50% of people still want to possess guns which goes against the argument and the impact the literature wants to create in the minds of the reader. Information stating that possessing more guns might have deterred crime takes the entire argument in another direction which is not the motive of the argument.

Redesigning the data product

The literature topic here is America’s has a unique gun problem. Below are the starting points I would consider redesigning this data product: -

I would like to identify what type of viewers would read this article? Am I targeting any special group of people?

Anticipate what kind of questions will a viewer have while reading this article?

Focus my data visualization around these questions.

What is the message I want to give the viewers?

What all spectrums can I view my data on? Is it more declarative or exploratory? Do I need to persuade my viewers to take a stand? Does my data visualization support an argument to take a stand?

Do I need to recommend any strategies? Does my data have to be actionable or be neutral?

Ideally the viewers of this article are generally well-read people who would like to take a stand on whether guns laws should be stricter. As a viewer I would start by anticipating the type of questions that would come in a viewer’s mind which are as follows: -

Impact of gun violence in US

Possible reasons that why US have a unique gun problem

Data Visualization focused on giving possible reasons and impact

I should take a stand about gun laws

Are there any specific measures that one can take to avoid these gun violence problems?

I would want to look at solutions to the proposed problems

My data visualization product will focus on the above broad points. I would use better colors, graphs and data layout to improve the overall impression and give a more direct message to the viewer which helps them to take a stand at the end of the article. I would remove the last 3 charts since the information given is digressing from the topic. I would design a more strategy or action-oriented data product rather than leave the viewer in the dilemma about whether I should support right to gun laws or be oppose it.

Thus my overall strategy to redesign the data product to develop a more comprehensive understanding about the issue at hand, what are the possible reasons and what could be potential measures or strategies that could be implemented which could allow the viewers to take a stand on the issue.

Following are the data sources which I could extract from the given article:

<http://www.gunviolencearchive.org/>

<https://www.vox.com/a/mass-shootings-sandy-hook>