

Worksheet 1: Brainstorm Key Points - Group Work (5 min)

Working back from what makes your project a success, brainstorm a few key points that you want to communicate through visualization. These points could be:

- (1) Background information about the problem that you're further exploring
- (2) Interesting characteristics of your data
- (3) Description of your methodological approach to the problem
- (4) Findings that you hope to discover or confirm in your analysis

Note: Pretend you have all the data you want

Within your group, identify key points you want to convey and write them down here.

Examples from the activity inequality paper:

- *Activity and obesity data gathered with smartphones are consistent with previous findings; that is, activity decreases with increasing age and BMI, and is lower in females than in males.*
- *Activity inequality is associated with obesity and increasing gender gaps in activity.*
- *A larger number of steps recorded is associated with lower obesity, but for females, the prevalence of obesity increases more rapidly as step volume decreases.*

1.

2.

3.

4.

5.

Worksheet 2: Visualization Design - Individual Work (10 min)

From the list of key points that you brainstormed with your group, pick one that you want to communicate through visualization. Work through the following questions and design your visualization.

Who's your target audience?

Examples:

- *General public with passing knowledge and interest in health and wellbeing*
- *Federal public health policy makers*
- *Academic researchers in data science for health*

What does your audience care about?

Examples:

- *Learn about what I can do to help my local community be healthier*
- *Identify key factors in obesity to inform public health policies*
- *Learn about a new computational method in health related data science*

Summarize your key point in one complete sentence.

Examples:

- *Activity and obesity data gathered with smartphones are consistent with previous findings; that is, activity decreases with increasing age and BMI, and is lower in females than in males.*
- *Activity inequality is associated with obesity and increasing gender gaps in activity.*
- *A larger number of steps recorded is associated with lower obesity, but for females, the prevalence of obesity increases more rapidly as step volume decreases.*

CSE481DS: Data Science Capstone
Visualization in Data Science

Design a static visualization that communicates your key point.

Worksheet 3: Design Critique - Individual Work (5 min)

Find someone who is not in your project group and exchange your visualization design (worksheet #2). You will provide feedback on their design using this worksheet.

First, read their description of the target audience. Pretend you are the target audience when you evaluate their design and provide redesign suggestions.

Then, answer the following questions as you are evaluating the design.

When you are finished, give the designer your feedback (this worksheet and their design) and discuss.

What is your name?

What is your interpretation of the key point that the visualization is trying to communicate?

Read the visualization designer's summary. What could be done better to ensure that the summary is communicated clearly? What gets in the way of clear communication?