# DES-465: Visualizing Data Narratives

Peggy Bloomer, PhD.
Email:  bloomerp@ccsu.edu | text: 203-215-9250
https://calendly.com/peggybloomer/extra-help

## DESCRIPTION / COURSE THESIS
Course Description
The purpose of this class is to use data to tell stories that will enable social change. The need to read, evaluate, and digest data is more important than ever, in order that complicated challenges, such as inequality, sustainability, and climate change, can be discussed and addressed in meaningful and intelligent ways. Students will employ effective methods to present data by following and evaluating case studies of inequality, sustainability, or climate change in the media. They will also explore methods to research, clean, and analyze data using creative methods and media to develop data storytelling. Students will set goals, define audiences, and use qualitative and quantitative representation of data. Each student will expand the skills learned in the course to create a final presentation of his/her data-driven project that focuses on social injustice, sustainability, or climate change.

## COURSE OUTCOMES
• Learn techniques for identifying a story in datasets.
• Communicate a point of view to persuade demographic audiences.
• Build a basic set of data analysis skills.
• Tell data-driven narratives with digital and non-digital tools.
• Connect data to social issues.
• Measure the effectiveness of data-driven narratives through presentation and critiques.

## WHAT YOU NEED FOR THIS COURSE
Software: Microsoft Excel
Software: JuliusAI
Data Wrapper: https://www.datawrapper.de/
Media Cloud: https://www.mediacloud.org/
JOURNALIST STUDIO: https://journaliststudio.google.com/,
https://journaliststudio.google.com/pinpoint/collections
Open Refine : https://github.com/OpenRefine

## UNITS
UNIT 1 What is Big Data, Creating Data Tables and
Knowledge Charts
UNIT 2. Persuasive Infographics
UNIT 3. Visualizing Data for Human-centric Problem Solving
UNIT 4. Creating Participation with Data

## ASSIGNMENTS
CLASS BLOG
UNIT 1 POST
UNIT 2 POST
UNIT 3 POST
UNIT 4 POST
FINAL PROJECT FOCUS
FINAL PROJECT METHODOLOGY
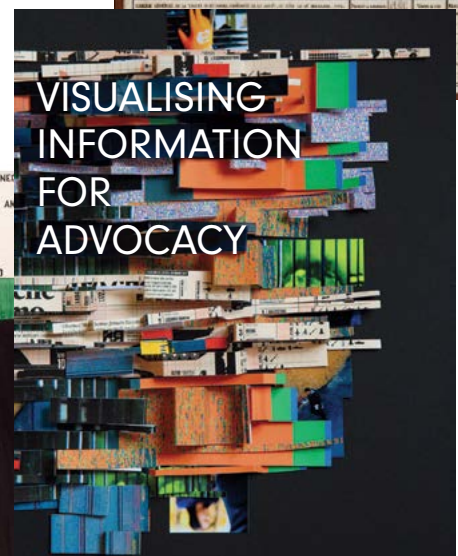FINAL PROJECT Social Impact
FINAL PROJECT MILESTONE 1
UNIT 1
UNIT 2
UNIT 3
UNIT 4

FINAL PROJECT MILESTONE 1
FINAL PROJECT MILESTONE 2
FINAL PROJECT MILESTONE 3
FINAL PROJECT MILESTONE 4
FINAL PROJECT PRESENTATION

**ONGOING COURSE PROJECTS:**
**SEMESTER BLOG ASSIGNMENT:** Semester blog on class readings and data narratives presented in various media.
**FINAL PROJECT:** Individual Final Project: Focus on Social Injustice, Sustainability, or Climate Change
The final project will use the skills developed in the semester. This project should be built on civic datasets to analyze and synthesize these datasets into a data story presentation. These projects should focus on social injustice, sustainability, or climate change. Students present their final project in class as their final exam and submit a printed booklet that records the steps of their exploration and creation of this project with reflections on the methods, goals, and results of the project.
For your final project, you need to gather, analyze, and summarize various datasets (from sources such as research or surveys) for a data-driven presentation. Your project must include the following components:
1. Social Justice or Climate Change Focus:
• Ensure your project connects strongly with social justice or climate change data, emphasizing data for the public good.
2. Data Story Presentation:
• Present your data story in a compelling and creative manner, targeting a clear and well-defined audience with specific goals.
3. Methodology Blog Post:
• Write an approximately 500-word blog post detailing how you found, cleaned, analyzed, and synthesized your data into a story. Include links to the cleaned datasets you created online.
4. Impact Blog Post:
• Write a 500-word blog post that covers:
    • Goals explaining the purpose of your data story.
    • A clearly defined audience for your data story.
    • A summary of semi-structured interviews or pre- and post-surveys conducted with a sample of your intended audience to gauge their reactions.
5. Project Presentation:
• Deliver a 5-minute presentation of your project. If you create slides, post them on the blog as well.
**Examples of Final Project Ideas**
To give you an idea of the acceptable scope and variety, here are some potential final projects:
• Long-form Journalism Article: Write a data-driven story accompanied by clear visuals to explain a complex issue to a general audience.
• Physical Sculpture: Create an artistic sculpture that reinterprets data to draw attention and interest from passers-by. You can build this or use the 3D printer in the library.
• Interactive, Board or Card Game: Develop a game that guides users through data, eliciting an emotional response and a call to action regarding the issue.
• Quiz: Create an online web quiz with interactive responses to teach the viewers about the topic.
• Community Collaboration: Partner with a community group to analyze their data and create visuals that effectively communicate their story to funders and the broader community.
• Comparative Study: Conduct a study comparing how people perceive and interact with different data presentations.
These are just a few directions you could explore. This course encourages creative new techniques for telling compelling data-driven stories and will showcase a variety of examples to inspire innovative ideas. Use these examples as inspiration, not limitations.

**EVALUATION CRITERIA**
Grading Scale: A = 93–100%, A- = 90–92%, B+ = 87–89%, and so on

# ASSIGNMENT PROMPT FOR DATA NARRATIVES INFORGRAPHICS FROM OPEN SOURCE DATA SETS

## UNIT I: Due Feb. 10th ⌄

## Assignment Instructions: Social Justice Data and Knowledge Map Project

**Objective:** Explore open-source datasets related to social justice, create structured data tables, and design a knowledge map that visualizes the relationships between your data.

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**Steps:**

1. **Select and Review Datasets**

   - Use the **List of Open Source Data Tables** provided in class to find or create datasets related to a social justice topic of your choice.
   - Ensure the data is relevant and meaningful to the theme of social justice.

2. **Read Background Material**

   - Read *What's the Difference Between an Ontology and a Knowledge Graph?* to understand the conceptual foundation of knowledge mapping.

3. **Create Data Tables**

   - Using Excel, organize the data into **3–5 tables**.
   - Each table should include clearly labeled columns and rows that reflect the structure and relationships within the data.
   - Ensure your tables are clean, consistent, and free of errors.

4. **Design a Knowledge Map**

   - Use **Figma** or **Adobe Illustrator** to create a knowledge map that visualizes the relationships between the data in your tables.
   - Incorporate symbols and colors to make your knowledge map intuitive and engaging.
   - Include:
     - Clear labels for nodes and connections.
     - A logical layout that reflects the relationships and patterns in your data.

5. **Finalize Your Deliverables**

   - Export your Excel tables and upload them as individual files.
   - Export your knowledge map as a **PDF** with a minimum size of **8.5 x 11 inches**.

6. **Submit Your Work**

   - Upload your Excel files containing the data tables.
   - Upload your knowledge map as a PDF.

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**Deliverables:**

1. **3–5 Excel Data Tables** (submitted as .xlsx files).
2. **Knowledge Map** (submitted as a PDF, minimum size: 8.5 x 11").

**Evaluation Criteria:**

- **Data Quality:** Organization, clarity, and accuracy of the tables.
- **Knowledge Map Design:**
  - Clarity and visual appeal of the layout.
  - Effective use of symbols and colors.
  - Accurate representation of data relationships.
- **Relevance:** Connection of the project to the theme of social justice.
- **Completeness:** Submission of all required files in the correct formats.

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**Note:**
Be creative in how you represent the data and its connections in your knowledge map. Use the provided readings as inspiration to ensure your work aligns with professional practices.