PADM-GP 4119
Data Visualization and Storytelling
Fall 2022

Instructor Information

- Brittany Mazzurco Muscato
- **Email**: brittany.muscato@nyu.edu OR bam396@nyu.edu
- **Office Hours**: Mondays 8:30–9:30 pm & *by appointment via Zoom*
  Sign up via my office hour blocks on my Google calendar.

Course Information

- **Class Meeting Dates and Times**: Tuesdays, 6:45–8:25 pm
  - Sep 6, 2022
  - Sep 13, 2022
  - Sep 20, 2022
  - Sep 27, 2022
  - Oct 4, 2022
  - There is no class on October 11
  - Oct 18, 2022
  - Oct 25, 2022
- **Class Location**: 12WV L111 (click here for a campus map)

Recitation

- **Meeting Times**: Thursdays, 8:35 – 9:35 PM
  - Sep 8, 2022
  - Sep 15, 2022
  - Sep 22, 2022
  - Sep 29, 2022
  - Oct 6, 2022
  - There is no class on October 13
  - Oct 20, 2022
  - Oct 27, 2022

- **Location**: ONLINE (link available via Brightspace)
- **Instructor**: Sophie Sharps
- **Email**: sbs642@nyu.edu
- **Office Hours**: Wednesdays 6:00–7:00pm
  Sign up via my office hour blocks on my Google calendar.

Course Prerequisites
- Introduction to Statistics

Course Description
In our increasingly data-reliant and data-saturated society, people who understand how to leverage data to generate insights have the power to change the world. Data visualization and storytelling is a crucial skill for policy and data analysts, communications and marketing professionals, and managers and decision-makers within nonprofits, social organizations, and the government. With the advent of visualization tools that do not require coding, data storytelling in the digital age is also an attainable skill set for people with varying levels of technical ability.

This hands-on introductory course will teach students how to develop meaningful data stories that reveal visual insights accessible for relevant audiences. Students will also learn the basics of Tableau, the industry standard in data visualization tools, to make sense of and visualize publicly available data. Students will leave the course with a portfolio of data visualization projects, analog and digital, that demonstrate the application of data storytelling. This course is intended for a beginner in data visualization and storytelling. *Students with extensive prior experience should consult the instructor before enrolling.*

Course and Learning Objectives

By the end of the course, students should be able to:
1. Evaluate and critique data visualizations to become better consumers of data.
2. Gain experience with presenting data insights through visualizations.
3. Understand and apply data visualization and storytelling best practices to communicate accessible and meaningful insights.
4. Develop meaningful data stories, gaining experience with the iterative process of data storytelling.
5. Construct captivating and engaging visualizations, dashboards, and stories in Tableau.

Learning Assessment Table

Graded Assignment	Course Objective Covered
Participation	All
Lab Sessions	#1, #3 and #5
Data Viz Critique	#1 and #2
Analog Data Viz Project	#3 and #4
Final Viz Project	#1, #3, #4 and #5

Class Policies

This is a fast-paced, hands-on course with a lot of material condensed into seven weeks.
Students should be mindful of the following expectations to ensure that they are benefitting from the
sessions and achieving intended learning objectives:
- Attendance for the entire class session for all seven sessions is mandatory. Students should
  not register for the class if they anticipate any conflicts.
- We will meet synchronously at the standard class time using Zoom. In the event that a student
  needs to be out of class, we are recording each class session via Zoom and making them
  available in NYU Brightspace. All students should access them there.
- Active engagement during the sessions is essential. This course is designed to be a largely
  practice-based course. Students will maximize class learning if they come prepared having
  completed their assigned reading and training materials, developed a basic knowledge and
  theory of the weekly session topic, and are ready to engage during the course discussions,
  labs, and recitations.
- Deeper engagement with the content outside of the class sessions will be needed to ensure
  students are able to complete assignments and projects successfully. Due to the condensed
  nature of the course, students will need to put in additional time outside of class sessions and
  should plan accordingly.

Required Materials

Readings: There is no textbook requirement for this class. Required readings will come from
noteworthy articles, blogs and book excerpts; all materials are available online via hyperlinks on this
syllabus or the NYU Brightspace website.

Software: To ensure successful lab/recitation participation, students are required to:
- Have downloaded a Tableau Desktop license on their laptop (students are eligible for
  a [free one-year license](#)).
- Ensure they have Microsoft Excel on their laptop.

Course Components

Readings

This course is designed to be a largely practice-based course. Therefore, it is crucial to come prepared to class with the basic knowledge and theory needed to have interactive discussions and a hands-on lab. (See Detailed Course Overview for more information for each week.) All materials are available online via hyperlinks on this syllabus or the NYU Brightspace folder. Students must read assigned chapters/articles _before_ coming to the respective session.

Orienting Discussions

Most course sessions will begin with a brief orienting discussion to recap best practices and lessons on data visualization and storytelling. Each discussion will build on the assigned reading material for that week and should be an opportunity to deepen knowledge and clarify questions.

Labs and Recitations

Most course sessions will include an experiential lab session. Students will also have an opportunity to hone their Tableau skills during a hands-on recitation immediately following each course session. To ensure successful lab/recitation participation, students are required to:

- Complete Lab pre-work _before_ class. See Detailed Course Overview for the lab components before class.
- Ensure they have downloaded a Tableau Desktop license on their laptop (students are eligible for a [free one-year license](#)).
- Ensure they have Microsoft Excel on their laptop.
- Download the lab materials for during class (see Detailed Course Overview for more information).

Assignments

Assignments are formative, intended to help students understand data viz tools and best practices. They consist of completion of lab-related deliverables, writing a data viz critique blog, and storyboarding the final project. Details on each assignment will be provided in the previous class session.

(1) Data Viz Critique - **_due September 20_**
Write a "blog" post (3-5 paragraphs) critiquing a data story from the real world (Look at newspaper articles or go to the blogs under Student Resources in the syllabus. You are not permitted to use a visualization from a blog post that is already critiquing it). Come prepared to present your critique in a breakout discussion group next class. _See rubric below for more information._

Important reminders:
- You must utilize Trifecta Checkup in your post and share at least 1-2 elements that may be missing from our data story best practices discussion last class
- You must explicitly write how you would improve the data story (be specific).
- Include a link to the original data viz.
- Audience: your classmates. Please write your piece using language and tone that is accessible to and appropriate for young professionals within Data Visualization.

Projects

Unlike the formative assignments, projects are intended to assess mastery over data viz content and skills. Evaluation information can be found under Assessment Assignments and Evaluation. Projects will be uploaded via the blog tool on NYU Brightspace.

(1) Analog Data Viz Project - **_due September 27_**

Students will create and present an analog "data postcard" by collecting and hand drawing data they collect over the course of several days/a week (see the Dear Data project for more information/ideas). This project is intended to reinforce the importance of communicating data insights effectively and creatively irrespective of the medium/tool. As students will not be using Tableau, students should be especially mindful about visualization execution (i.e., best practices on chart types, color schemes, legends, so on). You will still be expected to submit your data analysis in Excel in addition to your analog data viz.

(2) Individual Final Project - **_due October 25_**

All students must create a data story using Tableau that demonstrates their data visualization and storytelling skills through the course. While students are given free rein on content and execution, all data stories must contain three visualizations using Tableau Story Points. Data stories must also serve one of two goals: to help the intended audience make data-driven decisions or to convey meaningful impact information to an intended audience. An accompanying blog post should briefly contextualize the data story and explain how it achieves one of the two intended goals. Students will learn more about the final project during Week 4. A more detailed description of the final project can be found here.

To ensure that students are on track with their final project, the following completion deliverables will be enforced:

- **October 4**: Finalize final project topic and data set; bring storyboard idea (we will do a storyboarding workshop during the class session).
- **October 18:** Come to class with a rough Tableau workbook of your final project (there will be an opportunity to ask questions during class).
- **October 25**: Final projects due.

Assessment Assignments and Evaluation

Participation (15%):

Students are required to attend all class sessions and come prepared for and actively participate in class. All students will begin with the full 15 points. If students miss class or are unprepared for a class session, a maximum of 3 points will be deducted each session. Given the hybrid nature of this semester, active participation will include asking/answering questions during the session (including in chat) as well as contributing to the discussion in breakout groups. Please contact the instructor if any issues arise during the semester.

Attendance and participation in recitation sessions is strongly encouraged and will help students develop their Tableau skills, but will not be counted toward your Participation grade. However, the hands-on exercises in Recitations 2, 4, and 5 count toward Tableau lab assignments and should be completed/submitted in NYU Brightspace, regardless of recitation attendance.

Homework Assignments (30%):

Assignments will be split into three components:
- Tableau lab worksheets/workbooks (10%) – Graded on a 100-point scale based on completion.
- Data viz critique blog post (10%) – Graded on a 100-point scale based on completeness and demonstrated understanding (see rubric on page 7).
- Final project draft (10%) – Graded on a 100-point scale based on completion.

All homework assignments should be submitted via NYU Brightspace by the beginning of class on the specified due date. Late assignments will have 10 points deducted for every day it is late (even if submitted the same day but after class, 10 points will be deducted). If you receive a zero on a homework assignment, you can resubmit one homework assignment per semester for a maximum of 50% the total value of the assignment.

Analog Data Viz Project (25%):

The project will be evaluated on two components: completion of the project, including a presentation during class (10%) and the analog data viz (90%). The data viz evaluation rubric can be found on page 8. The presentation should explain the data story in a compelling, clear, and effective manner (pass/fail component based on completion). Be sure to share your data file in addition to the viz. Students will have 2 minutes to present their data story to the class (no slides). Make sure to share details on your process in addition to the image of your analog data viz during your presentation.

Final Project (30%):

The final project will be evaluated on two components: the data viz (90%) and the orienting blog post and presentation (10%). The data viz evaluation rubric can be found on page 9. The blog post should explain the data story in a compelling, clear, and effective manner (pass/fail component based on completion). Detailed instructions are provided in NYU Brightspace.

DATA VIZ CRITIQUE GRADING RUBRIC

CRITERIA Students are expected to:	0 points	15 points	30 points	50 points	60 points	70 points
Complete all parts of the Data Viz Critique Assignment (select an appropriate data story, submit the written critique by the due date, come prepared to present their critique).	Student does not complete the Data Viz Critique Assignment as assigned.	Student completes some parts of the assignment.				
Submit a written critique that demonstrates a clear understanding of the Trifecta framework (must be three to five paragraphs). Include at least one or two elements that may be missing from the data story. Explain how you would improve the data story (be specific).	Student does not submit a Written critique.			Student completes some aspects of the written critique. Student demonstrates a developing understanding of the Trifecta framework. Student does not include any missing elements. Student does not include how they would improve the data story.	Student completes all aspects of the written critique. Student demonstrates moderate understanding of the Trifecta framework. Student includes some missing elements. Student includes mention of how they would improve the data story but does not specify.	Student completes all aspects of the written critique. Student demonstrates a superior and thorough understanding of the Trifecta framework. Student includes one to two missing elements. Student includes specific examples of how they would improve the data story.

ANALOG DATA VIZ PROJECTS GRADING RUBRIC

NOTE: Instructor reserves the right to grade in partial increments when needed (e.g., a student satisfies some, but not all, of the criteria in a given category)

CRITERIA	0 points	5 points	10 points	20 points	30 points
Complete all parts of the project (e.g. data collection & analysis, submission of a data viz by due date, presentation)	Student does *not* complete the Data Viz Project as assigned.	Student completes *some* parts of the project.	Student completes all of the project components in a timely manner.		
Follow basic visualization fundamentals and best practices to demonstrate applied learning (e.g. suitable chart type, proper axes and labels, visual cues like headers, directions, color choice, etc.)	Student does *not* submit a data visual.		Student demonstrates a *developing* understanding of data visualization best practices. Data viz fundamentals have not been followed.	Student demonstrates a *moderate* understanding of data visualization best practices. *Some* data viz fundamentals have been followed but there is room for improvement.	Student demonstrates a *superior and thorough* understanding of data visualization best practices. Data viz fundamentals have been followed to convey a meaningful story.
Create a visualization that demonstrates creativity, attention to detail and design, and an understanding of Shaffer's 4Cs (i.e. clean, clear, concise, captivating)	Student does *not* submit a data visual.		Multiple aspects of the 4Cs are *missing*, or have not been well addressed in the visualization. Visualization does *not* demonstrate thoughtful planning. Visualization appears *sloppy* and may be difficult to understand as a coherent whole. Multiple issues with positioning or other distracting characteristics.	Aspects of the 4Cs are apparent; opportunity exists for *further* enhancement. Visualization shows thought and planning, and most aspects work in harmony. May exhibit *minor issues* with alignment or sizing mismatching with importance.	The 4Cs are *well* represented. Visualization demonstrates thoughtful planning. Color choices are conscious and consistent. Choice of position, size, and other emphasis elements clarify and/or enhance the viz to create a *visually appealing* and engaging whole.
Demonstrate a clear POV that allows the intended audience to arrive at a quick, fact-based conclusion.	Student does *not* submit a data visual.		The visualization suggests some possibilities, but does *not lead to clarity* of understanding or action. *Difficult* to understand how interpret the data and how it applies to the thesis of the analysis.	There is a clear message conveyed, but the action or conclusion that should be drawn is *less clear*. *Study* is required to interpret the data and how it applies to the thesis of the analysis.	The visualization is *targeted* to the audience, the POV is *evident*, and the conclusion or action is *clear*. The visualization facilitates *quick* cognition and leading to a fact-based conclusion or assertion.

FINAL PROJECT GRADING RUBRIC

NOTE: Instructor reserves the right to grade in partial increments when needed (e.g., a student satisfies some, but not all, of the criteria in a given category)

CRITERIA	0 points	5 points	10 points	20 points	30 points
Complete all parts of the Data Viz Project (e.g. data collection & analysis, submission of a data story and blog post by due date, presentation)	Student does *not* complete the Data Viz Project as assigned.	Student completes *some* parts of the project.	Student completes all of the project components in a timely manner.		
Follow basic visualization fundamentals and best practices to demonstrate applied learning (e.g. suitable chart type, proper axes and labels, visual cues like headers, directions, color choice, etc.)	Student does *not* submit a data story.		Student demonstrates a *developing* understanding of data visualization best practices. Data viz fundamentals have not been followed.	Student demonstrates a *moderate* understanding of data visualization best practices. *Some* data viz fundamentals have been followed but there is room for improvement.	Student demonstrates a *superior and thorough* understanding of data visualization best practices. Data viz fundamentals have been followed to convey a meaningful visual story.
Create a story that demonstrates creativity, attention to detail and design, and an understanding of Shaffer's 4Cs (i.e. clean, clear, concise, captivating)	Student does *not* submit a data story.		Multiple aspects of the 4Cs are *missing*, or have not been well addressed in the visualization. Visualizations appear *sloppy* and may be difficult to understand as a coherent whole. Multiple issues with font consistency, positioning, or other distracting characteristics.	Aspects of the 4Cs are apparent; opportunity exists for *further* enhancement. Visualizations show thought and planning, and most aspects work in harmony. May exhibit *minor issues* with alignment/ sizing mismatching with importance.	The 4Cs are *well* represented; the visualization is clear, clean, concise, and captivating. Color and font choices are conscious and consistent; choice of position, size, and emphasis integrate elements into a *visually appealing* and engaging story.
Convey a narrative/POV that allows the intended audience to arrive at a quick, fact-based conclusion.	Student does *not* submit a data story.		The story suggests some possibilities, but does *not lead to clarity* of understanding or action *Difficult* to understand how to interpret the data and how it applies to the thesis of the analysis.	There is a clear message or story conveyed, but the action or conclusion that should be drawn is *less clear* *Study* is required to interpret the data and how it applies to the thesis of the analysis.	The story is *targeted* to the audience, the POV is *evident*, and the conclusion or action is *clear* The visualization facilitates *quick* cognition and leads to a fact-based conclusion or assertion.

Letter Grades

Letter grades for the entire course will be assigned as follows:

Letter Grade	Points	NYU Brightspace Scale (out of 100)
A	4.0 points	95 – 100
A-	3.7 points	90 – 94
B+	3.3 points	87 – 89
B	3.0 points	83 – 86
B-	2.7 points	80 – 82
C+	2.3 points	77 – 79
C	2.0 points	73 – 76
C-	1.7 points	70 – 72
F	0.0 points	

Student grades will be assigned according to the following criteria:

- (A) Excellent: Exceptional work for a graduate student. Work at this level is unusually thorough, well-reasoned, creative, methodologically sophisticated, and well written. Work is of exceptional, professional quality.

- (A-) Very good: Very strong work for a graduate student. Work at this level shows signs of creativity, is thorough and well-reasoned, indicates strong understanding of appropriate methodological or analytical approaches, and meets professional standards.

- (B+) Good: Sound work for a graduate student; well-reasoned and thorough, methodologically sound. This is the graduate student grade that indicates the student has fully accomplished the basic objectives of the course.

- (B) Adequate: Competent work for a graduate student even though some weaknesses are evident. Demonstrates competency in the key course objectives but shows some indication that understanding of some important issues is less than complete. Methodological or analytical approaches used are adequate but student has not been thorough or has shown other weaknesses or limitations.

- (B-) Borderline: Weak work for a graduate student; meets the minimal expectations for a graduate student in the course. Understanding of salient issues is somewhat incomplete. Methodological or analytical work performed in the course is minimally adequate. Overall performance, if consistent in graduate courses, would not suffice to sustain graduate status in "good standing."

- (C/-/+) Deficient: Inadequate work for a graduate student; does not meet the minimal expectations for a graduate student in the course. Work is inadequately developed or flawed by numerous errors and misunderstanding of important issues. Methodological or analytical work performed is weak and fails to demonstrate knowledge or technical competence expected of graduate students.

- (F) Fail: Work fails to meet even minimal expectations for course credit for a graduate student. Performance has been consistently weak in methodology and understanding, with serious limits in many areas. Weaknesses or limits are pervasive.

Detailed Course Overview

WEEK 1
- Lecture date: Tuesday, September 6, 2022
- Recitation date: Thursday, September 8, 2022

Lecture Topics:
- The case for data visualization and storytelling
- Data visualization and storytelling details and best practices

Recitation topics:
- Introduction to Tableau (Lab Session)
- Tableau Review + Best practices
- .twb vs. .twbx
- Joins vs. Relationships

Pre-Class Preparation:
Readings Due:
1. Dykes, Brent. "Data Storytelling: The Essential Data Science Skill Everyone Needs." *Forbes.com*. March 31, 2016.
2. Shaffer, Jeffrey A. "The Shaffer 4 C's of Data Visualization." *Data + Science.* [Google Drive]
3. Shaffer, Jeffrey A. "The Shaffer 4 C's of Data Visualization: Clean Examples." *Data + Science.* [Google Drive]
4. Read these articles to generally understand what they're trying to accomplish, as well as consider their similarities and differences. We'll be using them in a class activity.
   - The New York Times. (2020, November 3). *Presidential election results: Biden wins*. The New York Times. Retrieved December 18, 2021.
   - Cai, W., & Fessenden, F. (2020, December 21). *Immigrant neighborhoods shifted red as the country chose blue*. The New York Times. Retrieved December 18, 2021.

Pre-Work Assignment/Materials:
- Please watch the video under the Getting Started accordion [especially the "Connecting to Data" and the "Workspace Area"]
- Complete and submit the Student Handout alongside viewing this training [Google Drive]
- Download the Global Superstore.xlsx dataset [Google Drive]

Deliverable Due:
- Submit completed Lab 1 Student Handout in NYU Brightspace before **recitation** start

Materials Used In-Class:
Lecture:
- Same as above

Recitation:
- Completed Lab 1 Student Handout document

WEEK 2
- Lecture date: Tuesday, September 13, 2022
- Recitation date: Thursday, September 15, 2022

Lecture Topics:
- The what, why, and how of critiquing data stories
- Introduction of data critique assignment and the analog data viz project
- Choosing the right visuals in Tableau (Lab Session)

Recitation Topics:
- Hands-on Exercise (Using Tableau for Data Driven Decision making)
- Review of Data Prep homework
- Review of Tableau visuals lab session

Pre-Class Preparation:
Readings Due:
1. Fung, Kaiser. "Junk Charts Trifecta Checkup: The Definitive Guide"
2. Schwabish, Jonathan. "An Economist's Guide to Visualizing Data"
3. Home Office Digital. Design for Accessibility
4. National Neighborhood Indicators Project. Data Visualization: Tips and Practice. Focus on Slides 4-7.
5. Tufte, Edward. *The Visual Display of Quantitative Information*, "Graphical Integrity" [Google Drive]
6. Hardin et al. (Tableau), "Which chart or graph is right for you?" [Google Drive]
7. Visit and peruse Dear-Data.com and Dear-Data-Two.com [In preparation for selecting team project]

Pre-Work Assignment/Materials:
- Complete Data Prep Handout [found on NYU Brightspace]
- Download Data Prep – Flights.xlsx [found on NYU Brightspace]
- Managing Extracts [4 minutes]
- Data Prep with Text and Excel Files [5 minutes]
- Getting Started with Visual Analytics [6 minutes]

Deliverables Due:
- Submit completed Data Prep homework in NYU Brightspace before **rectiation** start

Materials Used In-Class:
Lab Materials During Lecture:
- Global Superstore.xlsx [Google Drive]

Recitation:
- Hands-On Exercise: Using Tableau for Data Driven Decision making [Google Drive] Instructions

WEEK 3
- Lecture date: Tuesday, September 20, 2022
- Recitation date: Thursday, September 22, 2022

Lecture Topics:
- Data viz critiques – breakout group presentations
- Introduction to calculated fields and dashboarding in Tableau (Lab Session)

Recitation Topics:
- Advanced maps in Tableau
- Review of Calculated fields/dashboarding Lab Session

Pre-Class Preparation:
Readings Due:
- Hardin, Maila, Daniel Hom, Ross Perez, and Lori Williams. Which Chart or Graph is Right for You? Seattle, WA: Tableau Software.

Pre-Work Assignment/Materials:
- Using the Filter Shelf [7 minutes]
- Interactive Filters [4 minutes]
- Getting Started with Calculations [3 minutes]
- Calculation Syntax [4 minutes]
- Getting Started with Dashboards and Stories [5 min]
- Story Points [5 min]

Deliverable Due:
- Upload data viz critique assignment in NYU Brightspace before **lecture** start, Tuesday
- Submit completed Hands-on Exercise from Recitation 2 in NYU Brightspace before **recitation** start, Thursday

Materials Used In-Class:
Lab Materials During Lecture:
- Resolved Incidents.xlsx [Google Drive]

Recitation:
- Global Superstore.xlsx [Google Drive]
- Recitation Handout [Google Drive]

WEEK 4
- Lecture date: Tuesday, September 27, 2022
- Recitation date: Thursday, September 29, 2022

Lecture Topics:
- Analog project presentations
- Introduction of final projects
- Tableau Review/Q&A (Lab Session)

Recitation Topics:
- Final Projects: Review of Data Sources, Preparation and Analysis, Import and Blending
- Uploading Vizes to Tableau Public

Pre-Class Preparation:
Readings Due:
- N/A – work on analog data viz projects!

Pre-Work Assignment/Materials:
- N/A – work on analog data viz projects!

Deliverable Due:
- Upload analog data viz project in NYU Brightspace <u>before</u> **lecture** start

Materials Used In-Class:
Lab Materials During Lecture:
- Review of prior materials

Recitation:
- Bring your final project topic and dataset ideas
  - (optional) <u>Useful resources</u> and tips we've gathered over the semesters

WEEK 5
- Lecture Date: Tuesday, October 4, 2022
- Recitation Date: Thursday, October 6, 2022

Lecture Topics:
- Data storytelling in real world – breakout group discussion
- Final Projects Storyboarding Workshop (Lab Session)

Recitation Topics:
- Hands-on Exercise (Tableau Dashboarding)

Pre-Lecture Preparation:
Readings Due:
1. Ryan, Lindy. "Storyboarding Frame-by-Frame" in *Visual Data Storytelling with Tableau*. Boston, MA: Pearson Education, 2018. [Google Drive]
   - Pay particular attention to pages 176-178
2. (optional) Nussbaum, Cole. "#SWDchallenge: sticky notes." *Storytelling with Data* (blog), November 1, 2018.
3. (optional) Nussbaum, Cole. "how i storyboard." *Storytelling with Data* (blog), August 25, 2015.
4. Review/skim these examples below. (If you have an example you'd like to share, please do!) Be prepared to walk through these and compare the different data storytelling and visualization techniques used:
   - UN Sustainable Development Goals (skim the PDF report and review the interactive Storymap by clicking on the individual SDG icons)
   - Girls Who Code 2021 Annual Report
   - Tableau Foundation Living Annual Report
   - Health Intelligence, "A global overview of the magnitude, disparities and trend of infant mortality in the world."

Pre-Work Assignment/Materials:
- N/A – focus on final projects!

Deliverable Due:
- Finalize final project topic and dataset and bring storyboard idea to lecture and recitation

Materials Used in Class:
Lab Materials During Lecture:
- Bring your final project topic, dataset, and storyboard idea for session

Recitation:

- Hands-on Exercise (Tableau Dashboarding) Instructions, Telecommunications.twbx

WEEK 6
- Lecture date: Tuesday, October 18, 2022
- Recitation date: Thursday, October 20, 2022

Class Topics:
- Final Projects Q&A
- Advanced Tableau workshop and #MakeoverMonday Live Challenge (Lab Session)

Recitation Topics:
- Open Office Hours for Tableau Questions

Pre-Class Preparation:
Readings Due:
- Few, Stephen. Common Pitfalls in Dashboard Design. Boise, ID: ProClarity, 2006.
- Review Makeover Monday for live in-class challenge Accessed June 7, 2020 **(Read the home page, and then review examples in the gallery and community)**
- Refresh: Ryan, Lindy. "Storyboarding Frame-by-Frame" in *Visual Data Storytelling with Tableau*. Boston, MA: Pearson Education, 2018. [Google Drive]
  - ▪ Pay particular attention to pages 176-178

Lab Pre-Work Assignment/Materials:
- Focus on final projects! For those interested in improving their dashboard formatting, review the following course in LinkedIn Learning: Creating Interactive Dashboards in Tableau 10. Focus on following modules: Worksheet Design, Dashboard Design and Designing Interactivity

Deliverable:
- Submit your draft final project Tableau workbook before **lecture** start, Tuesday. Make sure you have at least 2 draft story points and notes about what data/graphs you are thinking about using to tell the story.
- Bring final project questions to **lecture and recitation.**
- Submit completed Hands-on Exercise from Recitation 5 in NYU Brightspace before **recitation** start, Thursday.

Materials Used In-Class:
Recitation:
- Bring your own Tableau workbooks and come with questions!

WEEK 7

- Lecture date: Tuesday, October 25, 2022
- Recitation date: Thursday, October 20, 2022

Lecture Topics:

- Course key takeaways and reflections
- Final project presentations

Recitation Topics:

- **** No recitation but longer class time to accommodate final presentations****

Pre-Class Preparation:

Readings Due:

1. N/A

Lab Pre-Work Assignment/Materials:

- Focus on final projects! For those interested in improving their dashboard formatting, review the following course in [LinkedIn Learning](#): Creating Interactive Dashboards in Tableau 10. Focus on following modules: Worksheet Design, Dashboard Design and Designing Interactivity

Deliverable Due:

- Final projects due in NYU Brightspace by start of **lecture,** Tuesday

Student Resources

NYU Data Services has an entire [collection of resources on Tableau](#) as well as offers [in-person consultations](#) for NYU students. Also, NYU students have free access to [LinkedIn Learning (through NYU Home)](#) which offers a warehouse of online talks and data courses on data visualization.

There are countless blogs on data visualization online that can serve as helpful references. Here are a few to get started:
- [Tableau Public](#)
- [Storytelling with Data](#) by Cole Nussbaumer
- [FlowingData](#) by Nathan Yau
- [Information is Beautiful](#) by David McCandless
- [PolicyViz](#) (Check out the podcast) by Jonathan Schwabish
- [Junk Charts](#) by Kaiser Fung
- [Data Therapy](#) by Rahul Bhargava

Select data sources that can potentially be used for the final project:
- [Tableau Public](#)
- [Tableau Community Forums](#)
- [Gapminder](#)
- [NYC OpenData](#)
- [U.S. Census Data](#)
- [Data.gov](#)

Supplementary Resources
- Edward Segel and Jeffrey Heer, [“Narrative Visualization: Telling Stories with Data”](#)
- Tableau Webinar, [“How to Design Engaging Data Stories in Tableau: 7 Starter Story Types”](#)
- Dashboarding Inspiration, [Everyday Dashboards](#)

NYU Brightspace and Course Communication

This is a living syllabus and may change throughout the semester. All changes will be communicated via announcements through NYU Brightspace. Students should ensure they are receiving notification emails when new announcements are posted. Lecture slides and completed lab files will be uploaded after each class in NYU Brightspace under Content → respective week.

Students should feel free to email me with any questions and expect a response within 48 hours. Students should be mindful that this is not my full-time job; responses during business hours will likely be limited.

Technology Support

Students have 24/7 support to NYU's IT services. Explore the NYU servicelink knowledgebase for troubleshooting and student guides for all NYU-supported tools (like NYU Brightspace, Zoom, etc). Contact askIT@nyu.edu or 1-212-998-3333 (24/7) for technology assistance, or you may contact Zoom's 24/7 technical support (this includes a chat function), or Review Zoom's support resources. Don't forget, your peers are another source of support. You could ask a friend or classmate for help or tips.

If you do not have the appropriate hardware technology nor financial resources to purchase the technology, consider applying for the NYU Emergency Relief Grant.

Academic Integrity

Academic integrity is a vital component of Wagner and NYU. All students enrolled in this class are required to read and abide by Wagner's Academic Code. All Wagner students have already read and signed the Wagner Academic Oath. Plagiarism of any form will not be tolerated and students in this class are expected to report violations to me. If any student in this class is unsure about what is expected of you and how to abide by the academic code, you should consult with me.

Henry and Lucy Moses Center for Students with Disabilities at NYU

Academic accommodations are available for students with disabilities. Please visit the Moses Center for Students with Disabilities (CSD) website and click on the Reasonable Accommodations and How to Register tab or call or email CSD at (212-998-4980 or mosescsd@nyu.edu) for information. Students who are requesting academic accommodations are strongly advised to reach out to the Moses Center as early as possible in the semester for assistance.

NYU's Calendar Policy on Religious Holidays

NYU's Calendar Policy on Religious Holidays states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. Please notify me in advance of religious holidays that might coincide with exams to schedule mutually acceptable alternatives.