### Premise

For this project, you will visualize 311 Complaint Data from the New York City Open Data Portal. You will formulate your own research question that can be addressed through the data and identify the audience who would benefit from your research. For example, your investigation might be designed for specific department within the city's government or enable a community group to better align its efforts with the living conditions of its residents. Be creative and think about who you want to serve with your work.

By the end of this project, you will be able to: \* Access, explore, and leverage a public data source \* Formulate a research question that a specific data set can address \* Build a thoughtful and accurate visualization using Tableau \* Contextualize the process and scope of your work in a blog post \* Publish your blog post with your embedded visualization using the CUNY Academic Commons.

# **PART I: Project Proposal**

### DUE 6am Sunday, Sept 13 via email (10%)

Your proposal should outline these four dimensions:

- 1. Your research question. Your research goal can take the shape of a question, topic, or title, but it must be coherent and addressable by this data set and through a visualization. We expect your research question will develop as you work with the data set. For example, your project may start with "What month has the most heating complaints?" and then expand into "What year(s) had the most heating complaints, and were those years colder than other years?"
- 2. Your audience. Who would benefit from an answer to your research question? Why does this question matter to them? You can give narrative context or a very direct statement of what is at stake. For example, "Understanding heating complaints is important to the Department of Public Health. By better understanding when heating complaints peak, they can better direct resources to assist those who are at the highest risk." As you begin to design your visualization, consider what functionality (such as filters or tooltips) would benefit this audience the most.
- 3. The data you will use to address your question. You must include the source and a brief description of the variables available in the data set that will be useful for your investigation. For example, "Heating complaints made in all five boroughs, organized by date from 2010 to present."
- 4. A sketch of how you plan to visualize your data. The sketch must be visual, preferably hand drawn. If you'd prefer, you may sketch it on a computer in a program such as <u>Gimp</u>, <u>Tayuski Sketches for iPhone</u>, <u>Medibang Paint</u>, etc. This sketch should not be a computer generated graph or other visual at this point in the process. It should be your initial ideas about what your visualization's ideal form might be to best answer the research question you've proposed. Attach a picture of this sketch to your email.

I will provide you with feedback by **Monday at 10pm**. I cannot take late submissions, but can take early ones. This timeframe is to ensure that what you have planned is reasonable and realistic. If your project needs revisions, you will not need to submit a revised proposal. However, if there are major changes, I may ask to schedule a video chat over the weekend to help reframe your project.

## **PART II: Visualization and Blog Post**

#### DUE 6pm Wednesday, September 23 (75%)

You will publish a blog post on your CUNY Academic Commons Site that includes the following components. The written component should be approximately 500-1,000 words.

- 1. Your research question. We understand that your research question may have evolved or completely changed since you submitted your proposal. However, your blog post must be cohesive. Its description and analysis must reflect the question or topic you have addressed in *this* version of your visualization.
- 2. Your audience. Describe the audience this visualization aims to serve.
- 3. A written description of your visualization. Explain your visualization in terms that a data novice would understand. Your goal is to make your work approachable. At this point in your post, anyone who has come across your site should understand what your research question is, why this topic matters to your audience, and how to read and interact with your visualization.
- 4. Your embedded visualization. Your visualization should be published on your Tableau Public Profile and embedded in your blog post. It should retain all the interactive functionality you built in Tableau.
- 5. An explanation of the data and design decisions you made. This section should illustrate what you did and why you did it. Why did you choose the type of chart/graph/visualization that you did? How does that choice best represent the data and address your question? Through this explanation, you will illustrate that the decisions you made were intentional and how they contribute to the project. You should also explain any limitations you encountered and any subsequent compromises you made with the data or your design.
- 6. **Next steps**. Finally, explain where you could take this project in the future. What would the immediate and more complex next steps look like? What improvements, developments, or alterations in scope would you make?

# PART III: Pin Up

#### DUE in class September 23, 6:30pm (15%)

The final component of this project is a pin up and critique. Each student will have the opportunity to receive thoughtful feedback about their work and offer the same to their peers. You must be present in class for the critique. Since critique is essential but ephemeral, if you have extenuating circumstances that prohibit you from attending a synchronous online class on Wednesday, September 23rd, you must make advance arrangements.

Some questions to help shape feedback:

- Does the data address the question?
- Does the visualization address the question?
- Does the visualization fit the data?
- Who is the intended audience of this visualization?
- Was the author successful in depicting the relationships in the data?
- Is the output informative and honest?
- Where could a consumer misinterpret the data?

#### Some notes

You can use as many or as few visuals to address your question/topic as you wish and as you feel is appropriate. You can continue to iterate on your project until you are satisfied, but the first version must be completed by Monday 1 hour before class. If you have major revisions after the critique, you may submit your project for reassessment.

Finally, the end product (from the website to the visualizations) should be reflective of you and your style. The objective is that you will have a portfolio of work at the end of the semester that illustrates your visualization skills. If you already have a portfolio or a personal site, talk to us about how to incorporate the two.

## **Evaluation**

#### Part I (10%)

10/10 for submitting on time and addressing all the components

#### Part II (75%)

- Appropriate choice of visualization (20)
  - The visualization type addresses the research question
  - The choice of graph or chart represents the data truthfully
- Effective Communication (20)
  - Intended message is communicated clearly
  - Data are accurately represented without distortion
- Design and Aesthetics (20)
  - All elements and features of the visualization have a communicative function
  - The visualization has a thoughtful layout and an intentional design
  - Title, headings, labels create helpful context and have appropriate sizes, locations, spellings
- Content of Blog Post (15)
  - The blog provides helpful context that makes the visualization more understandable and approachable
  - The writing provides the reader an inside look into the visualization's intent and creation process
  - All components of blog post are addressed
  - Decisions are in line with good visualization practices (see Data Points and Storytelling with Data)

#### Part III (15%)

15/15 for actively participating in the pinup. This includes sincerely listening to the feedback from the class as well generously offering your best ideas for improving the work of your peers.