

Team Roles:

Patrick:

- Responsible for team management and organization. Patrick manages the GitHub repository, notion board, and takes meeting notes.
- Responsible for cleaning data and will be in charge of the simple statistics functions of the visualizations.
- Responsible for creating the prototype JavaScript visualizations (Scatterplot/Map) so team members can work with them to add features.

Elizabeth:

- Responsible for the front end of our project. Using HTML and CSS, Elizabeth will create and maintain the webpage. As features get added, she will integrate them to our styled website.
- Responsible for managing our Figma board, which is where our visual brainstorming takes place.

Daniel:

- Responsible for cleaning data. As more data is added or variables are created, Daniel will be responsible for cleaning and integrating this data.
- Responsible for creating a prototype visualization that the JavaScript code will emulate.

Matt:

- Responsible for cleaning and analyzing data. Matt has ample experience with Jupyter notebooks, pandas, and NumPy and will be in charge of creating clean .CSV files for our visualizations to read and display.
- Responsible for creating visualizations for individual cities. We want a small display to show when a city is clicked, and Matt will be responsible for generating the graphs for that.

Schedule:

Date Range	Tasks to be completed	Team Member(s)
March 1 st – March 9 th	<ul style="list-style-type: none"> • Submit A3 and give presentation. • Start working with JavaScript and determine if the working data set is adequate for simple statistics and d3 plotting. • Create sample webpage so we can decide on styling, additional website features. 	<ul style="list-style-type: none"> • All • Patrick + Matt • Elizabeth + Daniel
March 10 th	<ul style="list-style-type: none"> • Team meeting to divide work for spring break and adjust the plan below. 	<ul style="list-style-type: none"> • All
March 11 th – March 21 st (Spring Break)	<ul style="list-style-type: none"> • Create the Scatterplot Visualization that is related to the change in renewable resources used over time. • Create the map visualization that relies on the coordinate data. 	<ul style="list-style-type: none"> • Matt • Patrick

	<ul style="list-style-type: none"> Using simple statistics, write JavaScript functions so users can calculate mean emissions, percentage change over time, and correlation for the data they want to look at. Style the website according to our discussion. Ensure that there are explanations of features on the website, even if they are not fully functional. 	<ul style="list-style-type: none"> Patrick & Daniel Elizabeth Daniel
March 22 nd	<ul style="list-style-type: none"> Team Meeting and Checkpoint. Our goal is to have a functional webpage with one of our two visualizations functional. The two visualization work together, so ideally both are functional. 	<ul style="list-style-type: none"> All
March 23 rd – April 2 nd	<ul style="list-style-type: none"> Ensure the population data is correct and potentially integrate another source. This will ensure that calculations can use a ‘per capita’ option. Integrate other data if possible. Europe also has rich data and could be integrated once the visualization are complete. Continue to update HTML and CSS as we add more features. Engage in discussions surrounding the ethics of our project for our team report. 	<ul style="list-style-type: none"> Daniel & Patrick Matt Elizabeth All
April 3 rd – End of semester	<ul style="list-style-type: none"> Finalize visualizations and ensure they are up to date with all data. Debug and make sure there are no errors. Write Report. Give Presentation. 	<ul style="list-style-type: none"> All All All All

What has been done so far:

Logistics:

- Communication and organization channels have been established. We have a GroupMe for rapid communication, a Notion board for managing individual tasks and deadlines, and a GitHub repository for organizing our HTML/CSS/JavaScript code for the visualization and the data.

- A Figma board has been created for brainstorming prototypes for the visualizations and webpages. It is easy to translate our ideas to pictures, and then pictures to HTML/CSS.

Data:

- Each team member has familiarized themselves with the data. At first, we all individually cleaned one of the 6 data sets. Once we had a good sense of the material, we refined our scope and used Jupyter notebooks to make final changes and get to a workable data set.
- Our workable data set has information for US Cities that have emissions AND energy mix data available for multiple years of our range. This way, we can create a visualization, run statistical analysis on the data, and create a map with a relatively limited scope. Depending on how it goes, we can integrate a larger data set down the road.

JavaScript:

- So far, we have not written any code in JavaScript. It is priority number one for a few of the team members. Our goal is to have something visible by spring break, so we can collaborate on it as a team and have time to meet with Professor Gotz about issues were having in the last two weeks of March.

Webpage/Design:

- We have had a productive design meeting about the visualization we want to use. We are going to have two visualizations, side by side, that will allow users to interact with data in multiple ways. We will have a map of American cities on one side, and a scatterplot on a double axis on the other. The two axis will be how much their emissions have changed over time and how much their percentage of renewable energy sources have changed over time. When a node is clicked, individual data (emissions, energy mix, population, change over time, etc.) will also be displayed.
- We have had loose conversations about what the website will look like, but Elizabeth has been researching other projects and has ideas.

Concerns:

Our concerns with this project have to do with quality of the data, but that is a reflection of the issue we are working with. Environmental reporting is tricky, and when we look at raw data its' clear. We are focusing on making a quality website and visualization of the data we have. It is more of a 'frame' than a real world solution.

- One of our concerns is about the overall quality of the data. This is self-reported data, and there are some doubts about how reliable this data is. Environmental reporting is a relatively new area, but it is critical to the wellbeing of society. We are committed to this project, and want to build a framework for effectively visualizing environmental data. If the quality is sub-par, then the prototype that we are developing in this class will highlight that and serve as a point of reference when better data becomes available.

- We want to have two visualizations appear side by side, and update in unison. We have done some work in class with having multiple SVG's on screen at the same time, but it is daunting.