

Data Visualization of Voyages to the Mariana

Trench

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DART 411

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ABSTRACT

Many research driven websites are very bland, outdated, and do not captivate their audiences. I aim to solve this by creating a modern, interactive, and informative data visualization website. I will be modernizing the available information of the Mariana Trench, in particular the past voyages into the trench, by creating a website that will utilize data visualization and interactivity. In doing this I will make researching topics more enjoyable and interesting. I will also host this website online for people to see.

DESIGN GOALS

- Interactivity
- Synthesized research
- Visual Appeal
- Usability

ANTICIPATED OUTCOMES

- Online interactive website
- Modern Data Visualization
- Enjoyable Learning Experience
- DataConnect Data Viz contest

RESEARCH PROCESSES AND INTENDED

RESEARCH

I intend to research D3js, past voyages into the mariana trench, data and depths, and the effectiveness of data visualization.

- D3JS
- Mariana Trench Voyages
- Data of depths and findings
- Effectivity of data visualization

<https://www.ncei.noaa.gov/products/world-ocean-database>

<http://www.deepseachallenge.com/the-expedition/mariana-trench/>

[https://catalog.data.gov/dataset/mariana-trench-bathymetric-digital-elevation-mod](https://catalog.data.gov/dataset/mariana-trench-bathymetric-digital-elevation-model)

[el](#)

https://www.pacioos.hawaii.edu/metadata/ngdc_bathy_180m_mariana.html

<https://observablehq.com/@d3/gallery>

[https://www.linkedin.com/learning/d3-js-essential-training-for-data-scientists/](https://www.linkedin.com/learning/d3-js-essential-training-for-data-scientists/welcome?autoAdvance=true&autoSkip=false&autoplay=true&resume=true)

[welcome?autoAdvance=true&autoSkip=false&autoplay=true&resume=true](https://www.linkedin.com/learning/d3-js-essential-training-for-data-scientists/welcome?autoAdvance=true&autoSkip=false&autoplay=true&resume=true)

[u=76811570](https://www.linkedin.com/learning/d3-js-essential-training-for-data-scientists/welcome?autoAdvance=true&autoSkip=false&autoplay=true&resume=true)

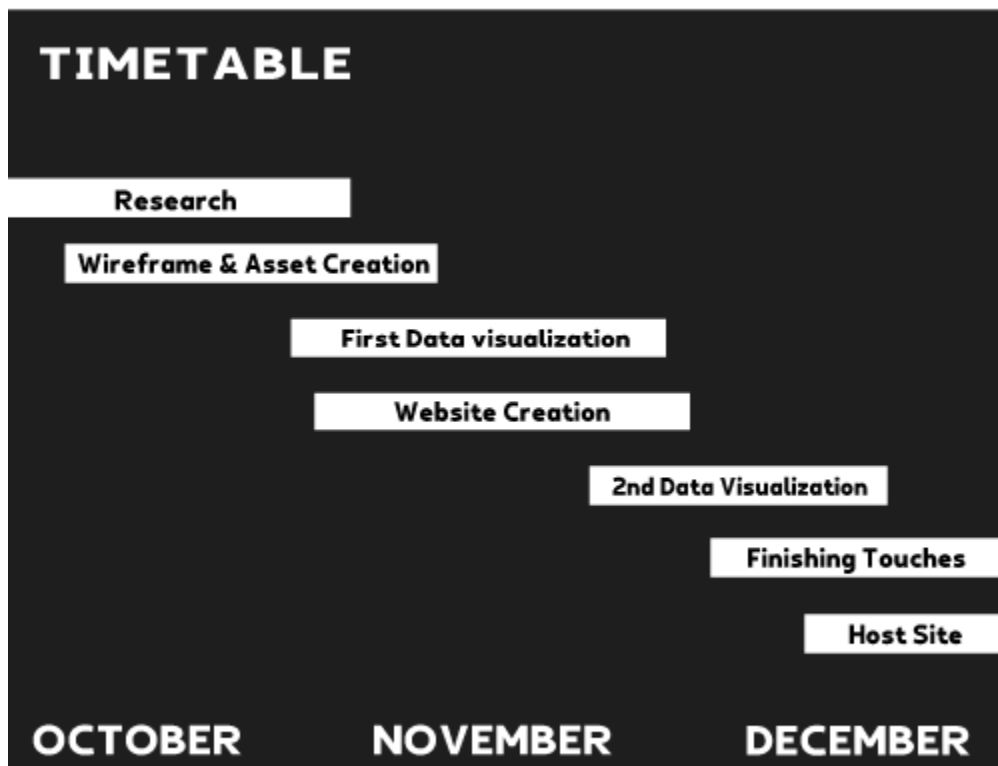
<https://prezi.com/tueo68jhsfce/the-mariana-trench/>

TIMETABLE

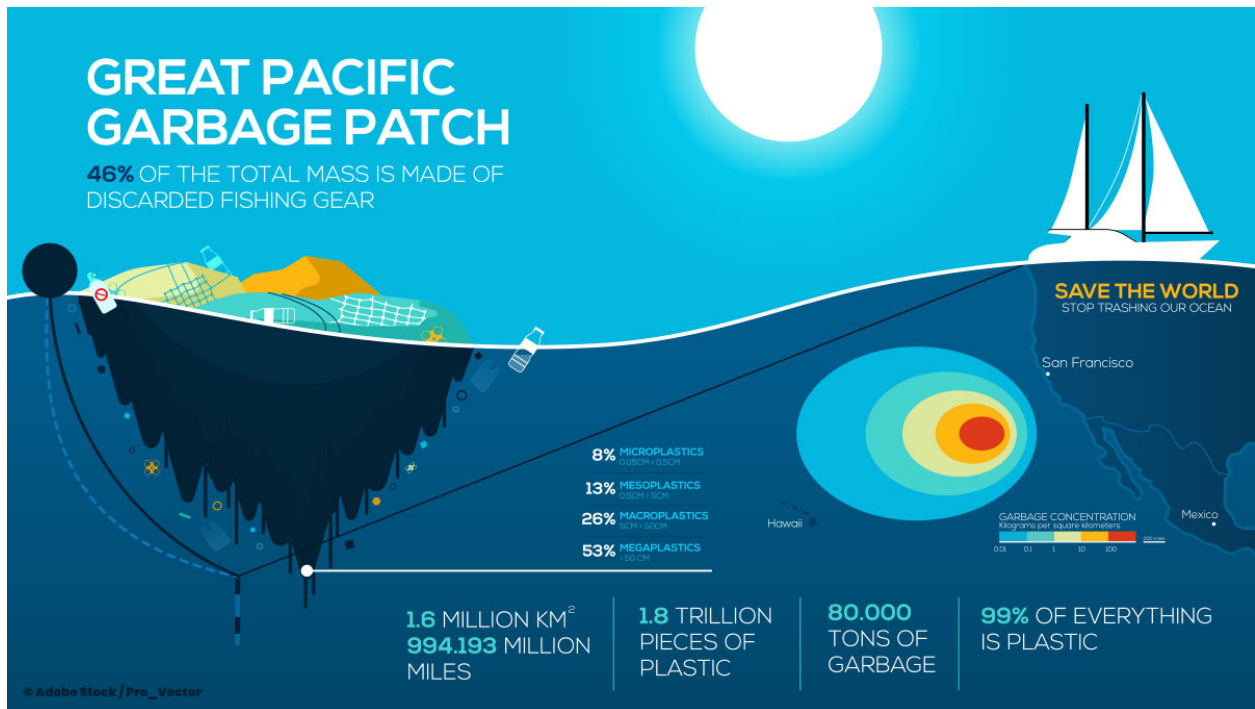
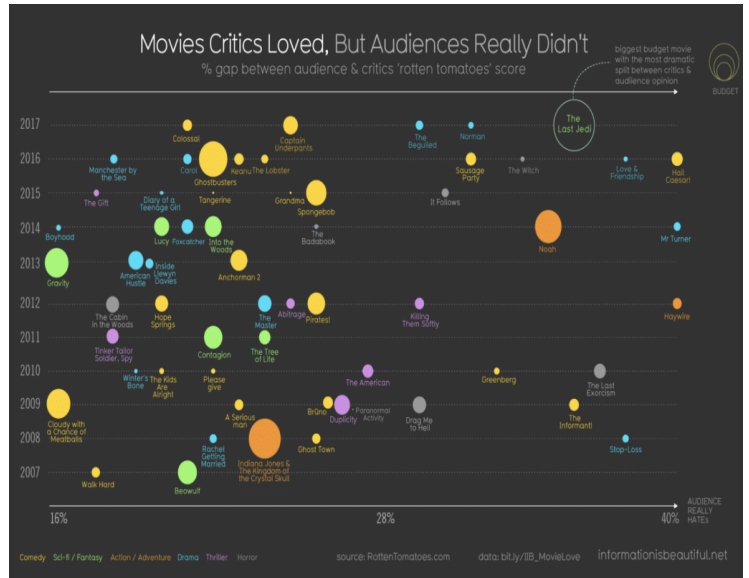
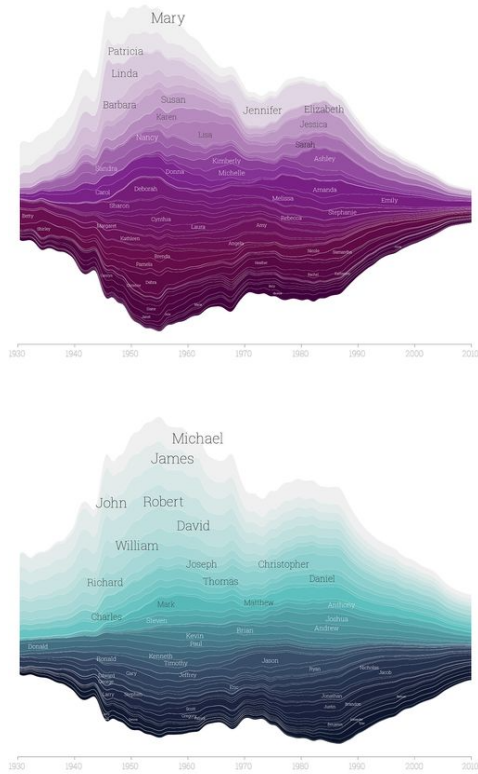
OCTOBER - Research D3, Gather Data Tables, Create Wireframe and gather assets (Research, Asset Creation)

NOVEMBER - Website Production and Data Visualization

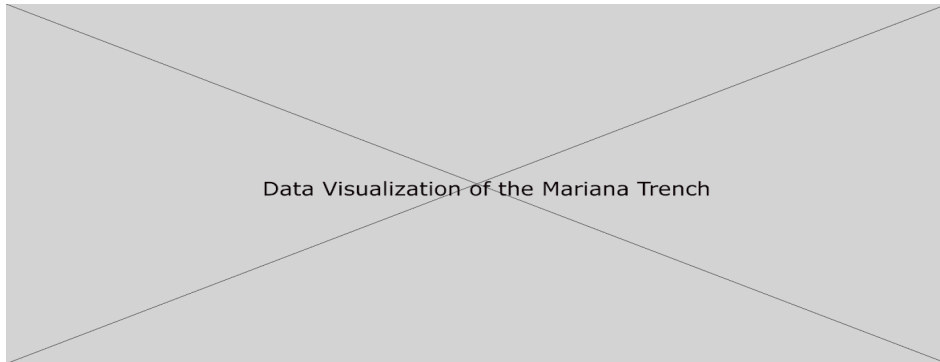
DECEMBER - Implement another Data Visualization, Finishing Touches, Host Site



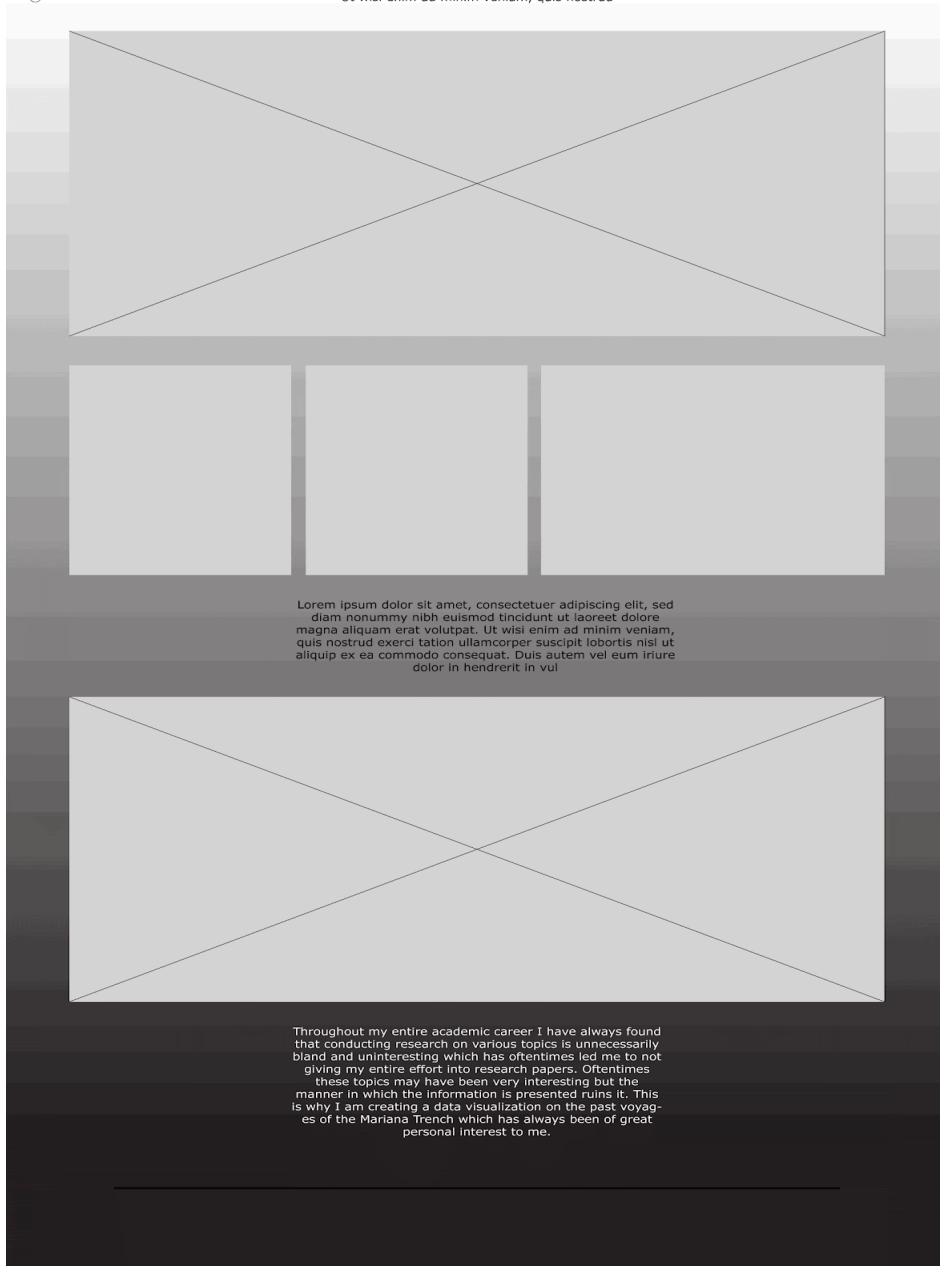
EXAMPLES



WIREFRAME



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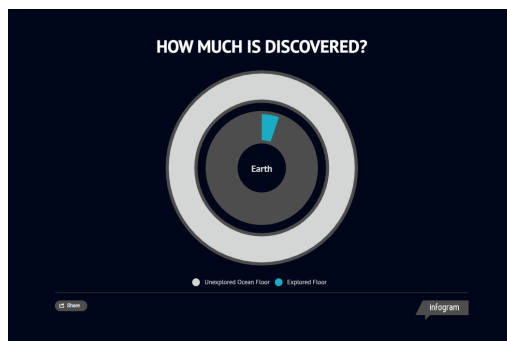
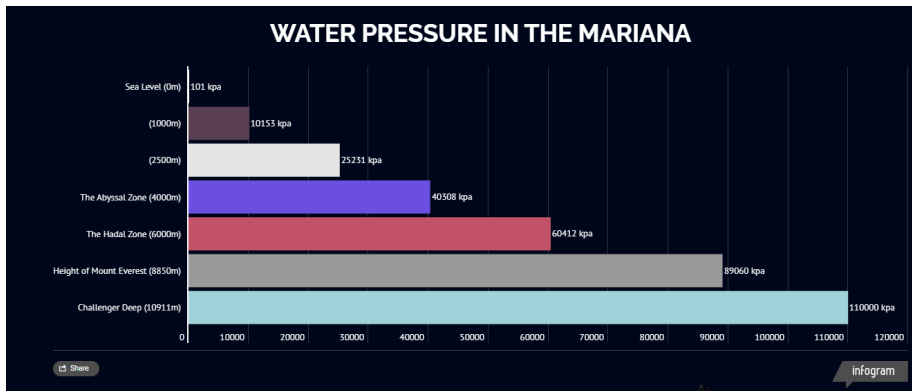
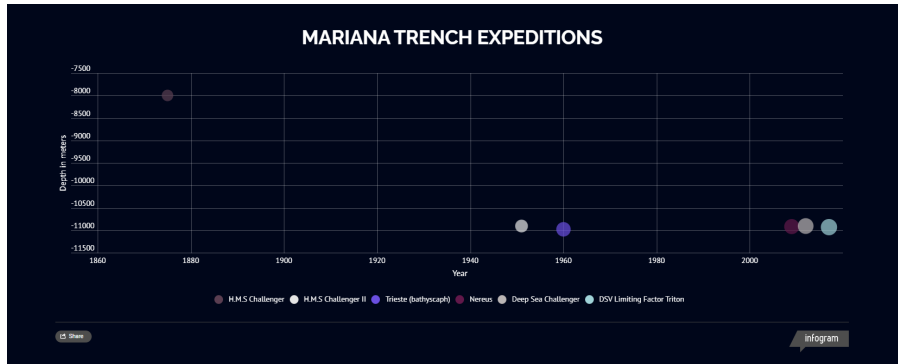


PERSONAL STATEMENT

I have always personally struggled in research papers and projects mainly due to the fact that I found gathering research to be very tedious, even when the topic I was studying was interesting to me. I have also grown up with very frequent visits to the beach and have always loved going on the ocean. This is why I chose to do a data visualization of the Mariana Trench. I believe that in doing this, I will create a more modern and engaging way to learn about topics that one may find interesting.

Interactive Data

I chose to use a 3rd party D3 Library / Plugin called infogram in order to make time for more features and interactivity. These data tables are very customizable and cheap. Using this library allowed me to create a more complete website in my timeframe.



Responsive

I have tested my website on three different browsers (firefox, chrome, and safari) on four different screen sizes and the website worked as intended. Some non-essential assets such as images and scroll effects are hidden on the smaller viewports however, all information and data tables are readily available.

Responses / Adjustments

After my presentation at the end of this semester there was some confusion about the third party data plugin I used (Infogram). Infogram is a paid code-free website application that allows the user to design interactive and animated data tables, import data sets from spreadsheets, and embed these tables into websites. I also received feedback on how my website should have 3-4 more interactions to feel really complete. In response to this, I plan on continuing development of this website after the semester and periodically push updates to its live site at marianatrench.online .

<https://marianatrench.online/>