

P6: Make Effective Data Visu...

Project Details

DATA VISUALIZATION WITH D3.JS

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PROJECT

Project Prep 2/2

✓ Project Overview

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Submission

How do I Complete this Project?

This project is connected to the **Data Visualization** (<https://www.udacity.com/course/viewer#!c-ud507-nd>) course. If you have background knowledge of data visualization, **dimple.js** (<http://dimplejs.org/>) or **d3.js** (<http://d3js.org/>) you may not need to take the whole course.

After completing Lesson 2 and Problem Set 2 of the course, you can start your project since you will have learned about dimple.js.

If you want to become more technical and expand your skill set, you can take Lesson 4, in which you will learn more about narrative structures and graphics using d3.js. The d3.js library has a steeper learning curve, so take on the challenge if you desire.

The process for evaluating your project is not affected by your choice of **dimple.js** (<http://dimplejs.org>) or **d3.js** (<http://d3js.org>).

Introduction

For the final project, you will create an **explanatory** data visualization that communicates a clear finding or that highlights relationship between variables. Your work should be a reflection of the theory and practice of data visualization, using either **dimple.js** (<http://dimplejs.org>) or **d3.js** (<http://d3js.org>).

We will provide some options of data sets to explore; however, you can use an entirely different data set. You should be aware that finding and cleaning a data set using Python, R, or some other language can take considerably more time than much as a day, a week, or even months to your project so be prepared to clean a data set if you are truly prepared with programming.

You have three options for this project. You should pick an option based on your experience with data munging and exploratory data analysis. Your choice will affect the evaluation of the project.

• Option 1

Select one of the beginner data sets, which already have a clear finding.

Data Set Options

(<https://docs.google.com/document/d/1w7KhqotVi5NmcWsLTliZrpxWx4w/pub?embedded=true>) documents the findings.

- **Option 2**
Select one of the intermediate data sets from the **Data** (https://docs.google.com/document/d/1w7KhqotVi5NmcWsLTliZrpxWx4w/pub?embedded=true) document to share a story or message about the data and then create a visualization.
- **Option 3**
Find a data set, investigate it, and share your findings. Your story should primarily be explanatory, but it may also contain a recommendation. You can find a list of recommended websites to find data sets in the **Data** (https://docs.google.com/document/d/1w7KhqotVi5NmcWsLTliZrpxWx4w/pub?embedded=true) document. You may also find your own data set, cleaning the data set, and analyzing it (using a Notebook, or another tool) can take considerable time. The time you spend on your project by days, weeks, or even months is the time you feel prepared for a challenge!

Now, on to the details!

Step One - Choose a Data Set

First, you will choose a data set from the **Data Set Options** (<https://docs.google.com/document/d/1w7KhqotVi5eoKE3NmcWsLTliZrpxWx4w/pub?embedded=true>) document or visualize. You should choose a data set based on your prior working with data. The data set you choose will not increase passing this project.

Step Two - Get Organized

Eventually you'll want to submit your project and share it. If (<https://github.com/>), we encourage you to create a public (<https://gist.github.com/>) for your project to track changes. following files.

- an **index.html** file containing the code to create your JavaScript and CSS in this file or separate them in other files
- a **README.md** file that includes four sections...
 - **Summary** - in no more than 4 sentences, briefly describe the project and add any context that can help readers understand the project

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- **Design** - explain any design choices you made ir after collecting feedback Project Details
- **Feedback** - include all feedback you received fr the first sketch to the final visualization
- **Resources** - list any sources you consulted to cr

• **data files**

- the final data set used to create the visualization
- a codebook or other files related to the data set

• **OPTIONAL FOLDERS IF YOU USE GITHUB** (<https://github.com>)

- **data** folder to include all the data related files
- **js** folder to include .js files (not needed if javascr
- **css** folder to include .css files (not needed if CSS

Step Three - Find a Data Story

Explore your data set and craft a message or story around y message you want to convey and think about the comparis readers to see. Remember that you will ultimately need to c explanatory, helping lead a reader to identify one or more k free to use whatever visualization and data analysis tools yc won't need to use dimple.js or d3.js at this point of the proc

Step Four - Create Your Visualization

First, sketch ideas for your visualization. Once you settle on in that sketch, such as chart type, visual encodings, and layc **README.md** file. Then, write code to create your visualizati (<http://dimplejs.org>) or **d3.js** (<http://d3js.org>). The visualiza interaction, or both. See the **Project Rubric** (<https://review.udacity.com/#!/projects/3184238632/rubri>)

Step Five - Get Feedback

Share your visualization with **at least 3 other people** and d many ways to get feedback, and more feedback is generally

- Share your visualization with others in person and hav explore the graphic so you can document what stands the graphic.
- Share a link to your repository in the discussions and i criticisms. Be sure to offer advice to others who are se

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- Create and share a **Gist** (<https://gist.github.com/>), with data file, and any .js or .css files). **Project Details**
<http://bl.ocks.org/> (<http://bl.ocks.org/>)

- **Box Plots Gist EXAMPLE:**

- <https://gist.github.com/mbostock/4061502> (<https://gist.github.com/mbostock/4061502>)
- <http://bl.ocks.org/mbostock/4061502> (<http://bl.ocks.org/mbostock/4061502>)

You might need to ask specific questions to prompt the reader to help you. You can, of course, ask others.

- What do you notice in the visualization?
- What questions do you have about the data?
- What relationships do you notice?
- What do you think is the main takeaway from this visualization?
- Is there something you don't understand in the graph?

Step Six - Document Feedback and Improve the

For each person that gives you feedback, add the person's feedback to the *Feedback* section. As you improve and iterate on your visualization, describe any changes in the *Design* section of the **README.r**

You should save multiple versions of your data visualization. You can do this using GitHub or a Gist by making commits to your repository. Save multiple version of your data visualization such as index1.html. Remember to save related files with similar numbers...

- main1.js, main2.js, ... , main_final.js (if you separate your logic)
- style1.css, style2.css, ... , style_final.css (if you separate your styles)

When should you save your files? You should save your files every time you make a change to your data visualization. If you get feedback and make changes, save the new version of your data visualization. If you have the data visualization working as you want, save the final version. That you have shared your visualization, received feedback, and made changes. You will need to submit the different versions of your visualization. **to submit an initial version of your data visualization (e.g., index.html) and the final index.html file and related files.**

Step Seven - Review

Use the **Project Rubric** (<https://review.udacity.com/#!/project-details>) to review your project. If you are happy with your submission, then you can submit your project. If you see room for improvement, keep working to improve your project.

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