IAT 355: Assignment 5 : Kickstarter

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Multiple Dimensions

For our first graph, we decided to use 3 dimensions in order to show the results we wanted. We used the main categories (attribute) and the total number of projects (measure) with the third dimension being the successful/failed projects (attribute).

This then connects to our second graph which uses 2 dimensions showing the time intervals such as months/years (attribute) and the total projects represented in each time interval (measure).

Multiple-Sourced Data

We decided to use two datasets provided by Kaggle with the results from their 2016 kickstarter dataset and the updated 2018 kickstarter dataset. To use both, we decided to parse the data first into excel, using vLookup to combine the id's with the missing data as well as removing many projects so we had a more manageable dataset to work with (for example, removing all data with cancelled/live states (updating it based of 2018 results) and choosing only to use projects that worked with Canadian currency only (therefore, canadian projects).

Filtering

Our use of filtering comes in the form of showing and hiding the data when clicking on the success and failed legend key, that way focusing the attention on what the user wanted. We also added an additional filter/highlight to allow users to focus on the success and failed states by hovering over the key words.

Sorting and hover state

As additional interactions, we included a hover state giving the accurate number of projects failed/successful as well as a sort function that organizes the first graph to sort categories based on popularity.

Brushing and Linking

For our use of brushing and linking, we chose to have the interaction of clicking on the bar graph in the first graph to open our second one showing more in depth information about the specific category.

Details on Demand

We added tool-tips when the mouse hovers over the bar to show the number of successful projects and the number of failed projects in each category.

Multiple Views

In this current stage of the project, we have 2 graphs that allow the users to interact and focus on different parts of the information.

Visualization Idiom

Our idiom used for the first graph is a stacked bar graph. We decided to use this because we wanted to accomplish the task of composition and comparison to showcase the information as a part-whole of the number of failed/ successful projects in each category.

For our second graph, we created a dot chart as we wanted to represent information that happened over time (ordered data) and wanted. We used this to see when projects were submitted most often throughout the year and trend of the failed and success states throughout the year.

Answer research questions

The problem that we are trying to address within our dataset is to help users determine what type of project categories they should pursue that are more likely to generate interest from the kickstarter backers and to find the changes in the data over the two sample years. To find out this information, we looked at the categories that kickstarter offers the creators to sort their projects with and see how each project type correlates with most completed backings and how project submissions trended over time. We also plan to look at how the project goal amount ($) relates to the percentage of successes and failures.

Explanation of Code

In this iteration of the project, we focused on how to add another chart that would showcase information of how many projects were created in each month to find the trend of the projects.

To add the sorting filter, we created a button in the HTML, then created a sort function to help explain

To add data from the first graph to the second graph, we created a function for graph 2 and then passed a parameter into it. So when the user clicks into the class bar and bar 2, the function graph 2 will be called and get d.key from graph 1 and inserts it into graph 2.

For parsing the data, d3.nest was used in order to find several data such as finding how many times that appear in each month under the variable projectPerMonth and then determining and using d3.max to find the largest number that appears out of every month for either success or failed projects and dynamically change the y-axis range in order to avoid the issue of overlapping data. For the nodes that appear in the chart, it utilizes d3.nest to find out in each month, for this particular category that has been selected, how many projects actually failed or succeeded in the variable projectPerMonthStates.

For hover effect, within my index.html file I created a new section with the id brush-tool and put two span tags into it and added onmouseout and on mouseover. Then in my javascript file, we added 3 functions, filterSuccess(), filterFailed(), and backToNormal() which determines whenever a user hovers over either success or failed text, it would call these functions to change the opacity of the circles with either a class of success or failed and revert them back to normal when users mouse is not within the vicinity of the text.

We ran into some issue with d3.nest() where sometimes it would change the order of which key belongs into which specific number. For example, majority of time, successful would fall under the number 1 and then 0 would be failed in which we would use the code d.values[1].value to find the value for success, but sometimes the order would reverse and have 0 as successful and then failed under 1. In order to prevent this issue, we implemented a condition in order to determine the key of d.values first using if(d.values[1].key == “successful”), once it meets this condition, then return d.values[1].value.

Resources:

Original 2 datasets used

https://www.kaggle.com/kemical/kickstarter-projects/data

Tool Tips:

https://bl.ocks.org/ayala-usma/d2f3b89c84e4ed66e22d02affcdcab73

Merging Datasets in D3

https://support.office.com/en-us/article/how-can-i-merge-two-or-more-tables-c80a9fce-c1ab-4425-bb96-497dd906d656

Nesting with d3.nest

https://bl.ocks.org/ProQuestionAsker/60e7a6e3117f9f433ef9c998f6c776b6

https://stackoverflow.com/questions/27347617/how-to-use-nest-and-rollup-functions-in-d3-tocreate-a-bar-chart

Accessing nested data

https://stackoverflow.com/questions/11922383/access-process-nested-objects-arrays-or-json

Legend

http://d3-legend.susielu.com

Scalable

https://stackoverflow.com/questions/16265123/resize-svg-when-window-is-resized-in-d3-js

Reference Libraries

D3: https://cdnjs.cloudflare.com/ajax/libs/d3/4.2.3/d3.min.js
Scale color: https://d3js.org/d3-scale-chromatic.v1.min.js
Legend: https://cdnjs.cloudflare.com/ajax/libs/d3-legend/2.25.5/d3-legend.js

Bar chart sorting

http://jsfiddle.net/3HL4a/2879/

Show/ hide elements

http://bl.ocks.org/d3noob/5d621a60e2d1d02086bf