

CPSC 583 Assignment 1

1. Getting an overview of the data

- a) Missing data points that I immediately noticed was missing description of certain service names like “311 Contact Us” or “CT – Transit Safety / Public Etiquette” and other service names. One thing unusual I found about the data was ward number, I found it unusual as there was no description of what the ward was attached to and so it sort of left me confused. Upon taking a quick look at the data, I noticed downtown commercial core and beltline had the most service requests. I also found it interesting how there were some service request with no community attached to it. Further, it was noteworthy that almost all communities in Calgary had service requests regardless of it was consider an affluent community or a less affluent community.
- b) Three questions that could be answered with this dataset:
 What is the average amount of service request for any given day?
 Which community had the most amount of service requests attached to it?
 What hours of the day are most service request made and why?

These questions are valuable because they provide insight into the data. Answering average amount of service requests would tell us how many service request can be expected. Communities making most service request can provide insight into which communities might need more attention. Answering hours of the day service request are made can lead us to taking measures to reduce the amount of service request for particular time frames.

2. Shaping the data

3. Creating Visualizations

a)

Service Requests for Brentwood, Charleswood and Hillhurst communities

Service Request ID	Requested Date	Service Name	Service Description	Community Name	Ward
21-00311473	May 1, 2021	Hot Topics - Events	City of Calgary Program/Services-Open/Closed	BRENTWOOD	4
21-00313894	May 3, 2021	Hot Topics - Events	City of Calgary Program/Services-Open/Closed	BRENTWOOD	4
21-00317331	May 4, 2021	Hot Topics - Events	Non City Business questions on Processes or Safety	BRENTWOOD	4
21-00321120	May 5, 2021	Hot Topics - Events	Transit Inquiry	CHARLESWOOD	4
21-00322438	May 5, 2021	Hot Topics - Events	Non City Business questions on Processes or Safety	HILLHURST	7
21-00324272	May 6, 2021	Bylaw - Disturbance and B..	Null	HILLHURST	7
21-00330094	May 7, 2021	Hot Topics - Events	Social Distancing Concern	HILLHURST	7
21-00334493	May 10, 2021	Hot Topics - Events	City of Calgary Program/Services-Open/Closed	BRENTWOOD	4
21-00337407	May 11, 2021	Hot Topics - Events	Federal/Provincial Funds	BRENTWOOD	4
21-00338647	May 11, 2021	Bylaw - Disturbance and B..	Null	CHARLESWOOD	4
21-00338737	May 11, 2021	Bylaw - Disturbance and B..	Null	CHARLESWOOD	4
21-00340424	May 12, 2021	Compliance - Taxi/Limousi..	Null	CHARLESWOOD	4
21-00347053	May 14, 2021	Hot Topics - Events	City of Calgary Program/Services-Open/Closed	BRENTWOOD	4
21-00349694	May 15, 2021	Bylaw - Disturbance and B..	Null	HILLHURST	7
21-00349994	May 15, 2021	Bylaw - Disturbance and B..	Null	HILLHURST	7
21-00350058	May 15, 2021	Bylaw - Disturbance and B..	Null	HILLHURST	7
21-00350089	May 15, 2021	Bylaw - Disturbance and B..	Null	HILLHURST	7
21-00354351	May 17, 2021	Hot Topics - Events	Parks Status/Closures/Restrictions Inquiry	HILLHURST	7
21-00354551	May 17, 2021	Bylaw - Disturbance and B..	Null	HILLHURST	7
21-00354919	May 18, 2021	Bylaw - Disturbance and B..	Null	HILLHURST	7
21-00362901	May 20, 2021	Bylaw - Disturbance and B..	Null	CHARLESWOOD	4
21-00366412	May 21, 2021	Hot Topics - Events	COVID Medical Info Resources	HILLHURST	7
21-00377331	May 26, 2021	CT - Employee Conduct	Null	HILLHURST	7
21-00386421	May 29, 2021	Bylaw - Disturbance and B..	Null	HILLHURST	7
21-00391514	May 31, 2021	Hot Topics - Events	City of Calgary Business/Services-Status	HILLHURST	7
21-00488627	July 2, 2021	311 Info Request Tracker	Null	HILLHURST	7
21-00494900	July 5, 2021	Hot Topics - Events	City of Calgary Business/Services-Status	BRENTWOOD	4
21-00500413	July 6, 2021	Hot Topics - Events	City of Calgary Program/Services-Open/Closed	BRENTWOOD	4
21-00509525	July 9, 2021	After Hours Office of the ..	Null	HILLHURST	7
21-00512018	July 11, 2021	Hot Topics - Events	City of Calgary Program/Services-Open/Closed	BRENTWOOD	4
21-00514541	July 12, 2021	Hot Topics - Events	City of Calgary Program/Services-Open/Closed	CHARLESWOOD	4
21-00517834	July 13, 2021	Hot Topics - Events	City of Calgary Program/Services-Open/Closed	BRENTWOOD	4

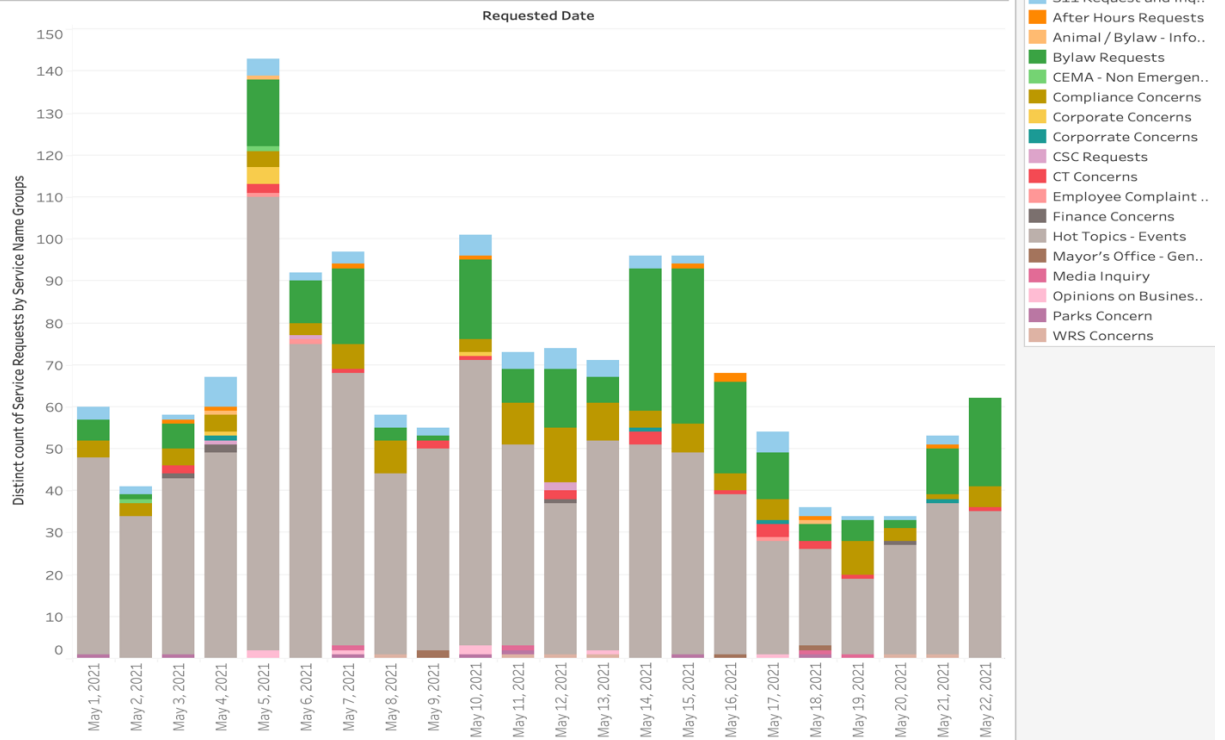
b)

Service Request per day in May



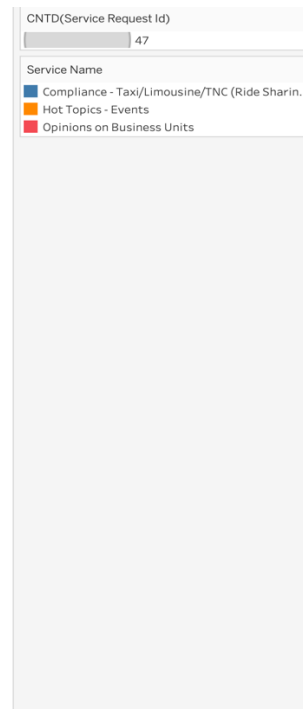
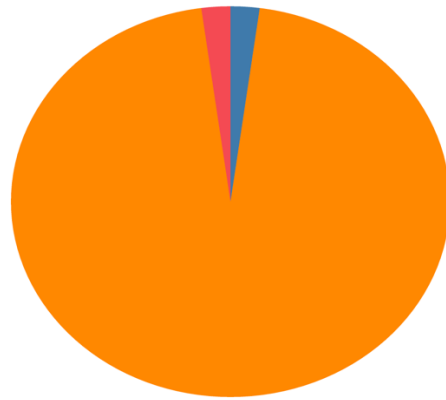
c)

Bar chart of service requests in May 2021



d)

Pie Chart of service requests by service name on July 1st, 2021

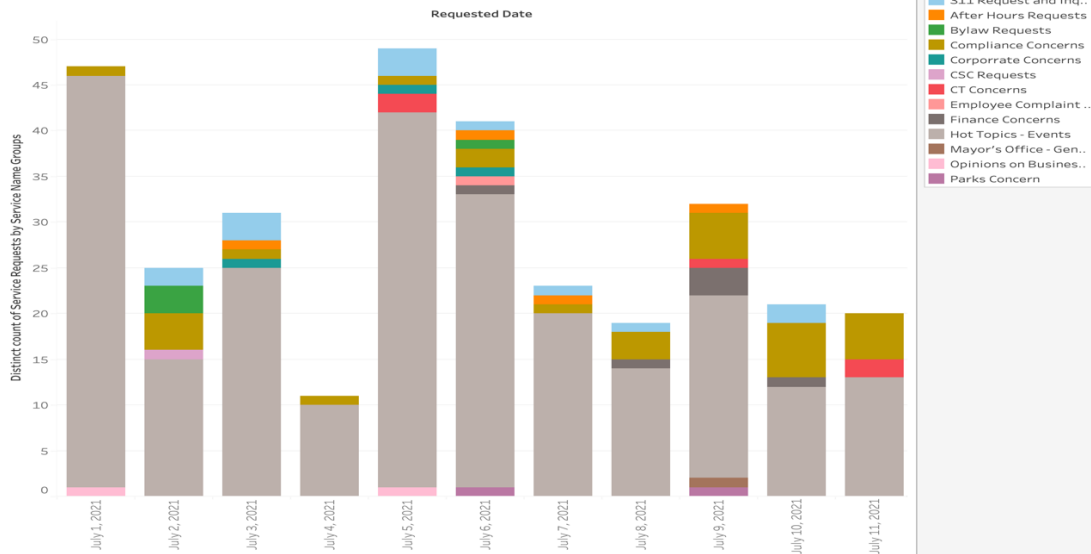


e) For each of the visualizations, I changed font sizes of titles, I have rotated labels on x and y axis for it to be more readable, I changed size and position of pie chart to be more central. I also grouped service names in May 2021 visual to reduced the amount of legends needed. I've renamed x and y axis titles.

4. Situating data in context

a)

Bar chart of service requests in July 2021



ii) The bar chart changes with the new filters as there are less bylaw request compared to May 2021 filter. There are also less requests in general for July. This visualization looks different as on May 5th, there was a protest against covid measures so explains why there were more bylaw request and 140+ different service calls. In July, restrictions were lifted there wasn't as many requests compared to May, when individuals had different issues with covid measures. Also, a mass amount of people had been vaccinated and most service calls were just hot topics.

5. Evaluating and expanding on the data source

- a) Measures of a good visualization for this specific dataset would be visualizations that answer questions someone interested in the data might have. "Good" will mean clarity in the sense of being clear and easy to understand without ambiguity. It will also mean insightful, revealing patterns, trends or relationships within the data as well as having relevance to the questions needing to be answered. "Good" will provide context as to the story it conveys. Accuracy is also important; data can't be misrepresented or inaccurate. Lastly "good" will entail consistency in the use of colors, scales, and labels throughout the visual. If the visual can incorporate all those criteria, it will be considered a "good" visual.
- b) Another question I would like to ask is what the age of people making the calls? So, I would need age or date of birth datasets to answer those questions. Biggest Challenge of collecting that data would most come from collecting people's ages, it is a sensitive information people don't want to share. I think this data would be a valuable thing to visualize in relation to the data to have an idea how to best protect those population of people with most calls. Steps that can be taken towards reducing the age with the most request to reducing the number of calls that need to be made. To create an awareness around the issue and a means by which they can feel better protected. I would use a bar chart to represent this data, to show the distribution over different ages. This would be the easiest way to communicate the visual to an onlooker in the most concise and quickest way as possible.

