THE CRAZE FOR PLASTIC SURGERY IN THE US

https://cherlinedelfina.github.io/FIT3179_ASS2/html/

Name: Cherline Delfina Tandra
Student ID: 31864767
Word count: 998
Lab: 02
Tutor: Jiazhou 'Joe' Liu

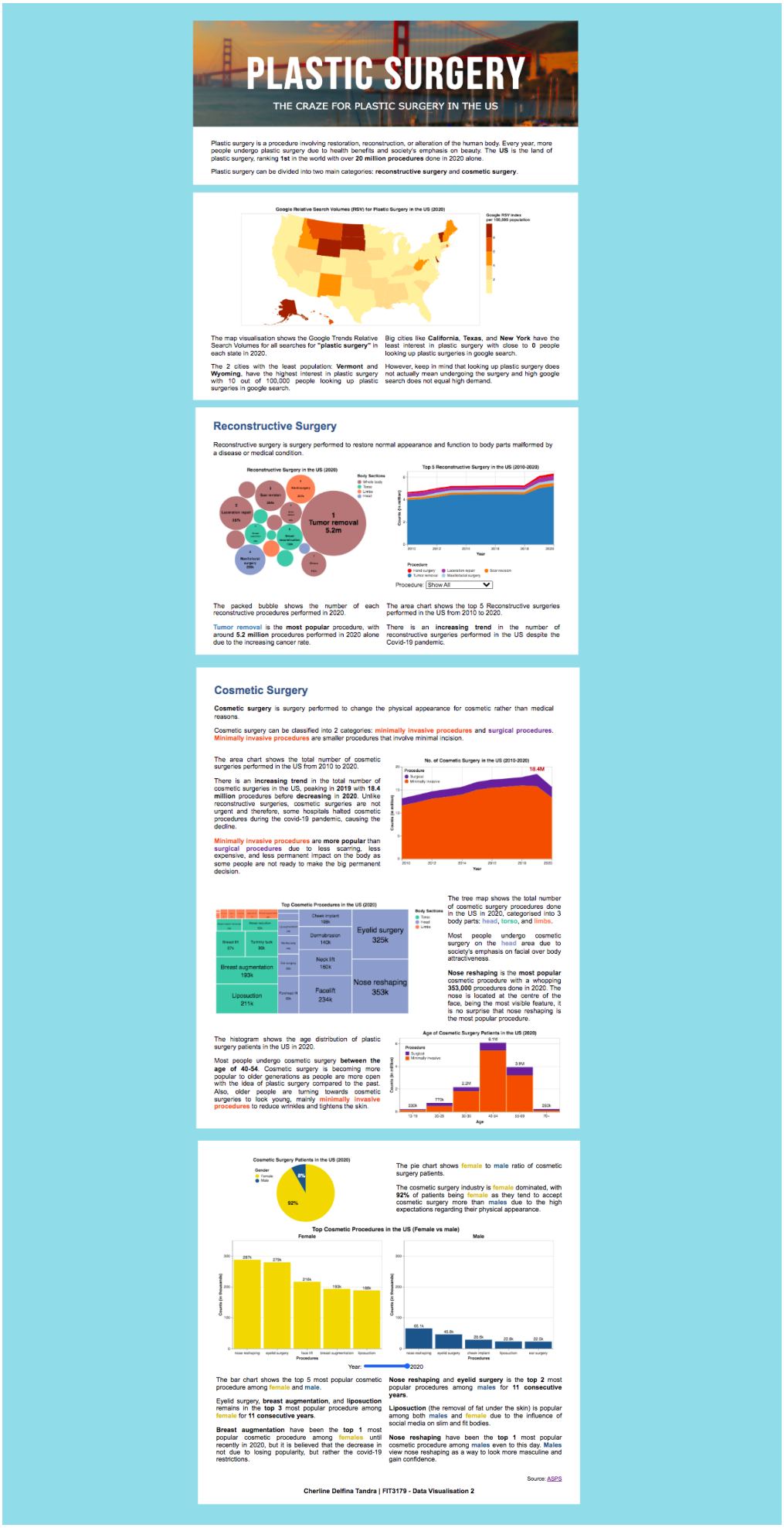


Figure 1. Dashboard

AIM

The domain of my visualisation is Plastic Surgery statistics in the US. My visualisation is aimed towards people who are interested in undergoing plastic surgery or those who want to know more about plastic surgery. The aim of my visualisation is to show plastic surgery statistics in the US based on 2 categories: reconstructive and cosmetic procedures.

WHAT

The data used is taken from a report of US plastic surgery statistics by ASPS, the largest plastic surgery specialty organisation in the world (ASPS, 2022). I used R-Studio and Microsoft Excel to clean the datas.

WHY & HOW

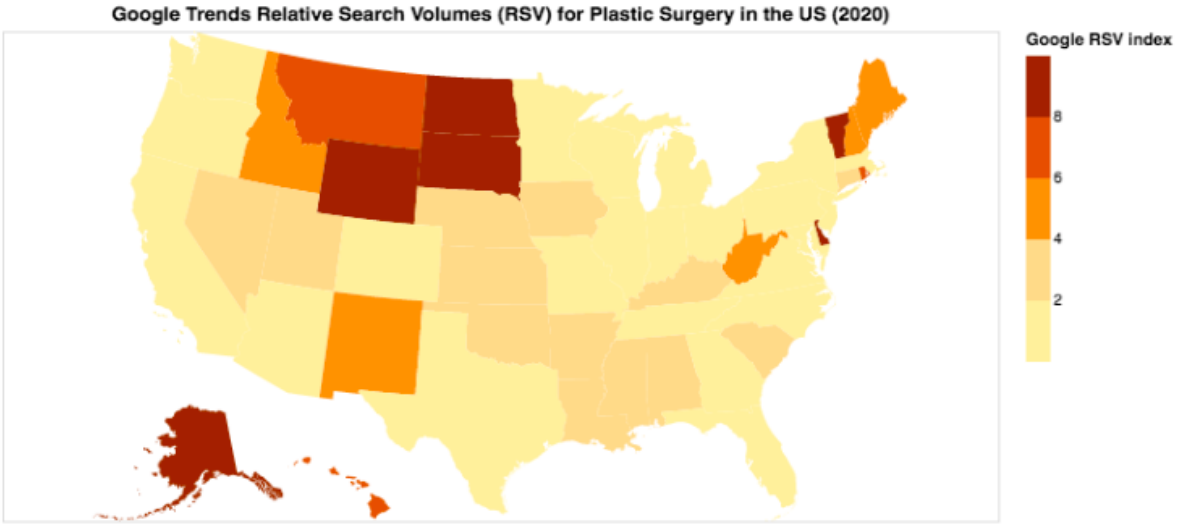


Figure 2. Google RSV for plastic surgery

I chose choropleth map (Figure 2) as choropleth map is best to visualise rate, allows readers to find the max RSV by looking at the darkest-coloured area and compare it to other regions.

The mark used is area, the channels used is colour luminance to show sequential quantitative value (RSV index).

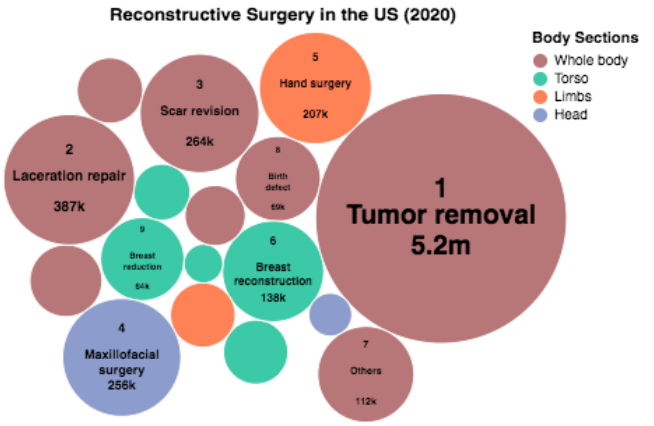


Figure 3. Reconstructive procedures

I used packed bubble (Figure 3) since packed bubble is best to show quantitative value (counts) for different categories (body sections). It allows users to compare and find the most reconstructive procedure (largest bubble).

The mark used is area, the channel used are area for quantitative value (counts) and colour hue for categorical value (body sections).

I used an area chart (Figure 4 and 5) as area chart is best to show datas with multiple categories (procedure) and how the quantitative value (counts) changes overtime. It allows readers to see the overall yearly trends and trends of each individual procedure using the drop down select filter. I chose to only show the top 5 procedures to not crowd the chart. The top 5 procedures make up 92% of the whole so it won't make much difference on the overall trend vs using all procedures.

The mark used is area, the channels used are colour hue for categorical value (procedure) and height for quantitative value (counts).

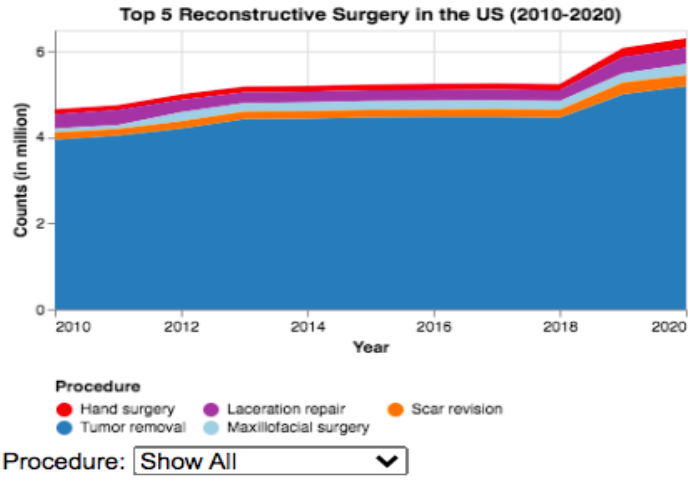


Figure 4. Reconstructive surgery trends

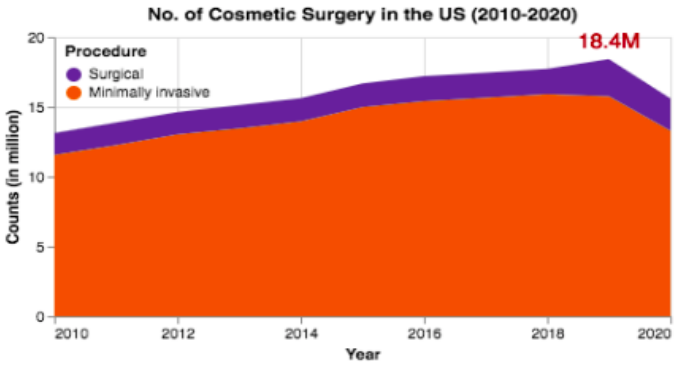


Figure 5. Cosmetic surgery trends

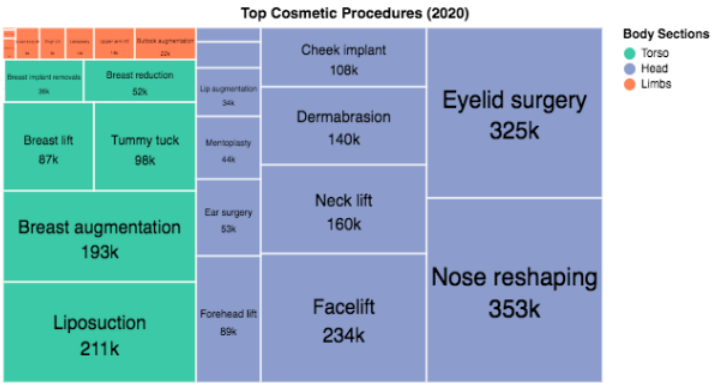


Figure 6. Cosmetic procedures

I chose a tree map (Figure 6) since it's a parent-child relationship (parent: head, torso, limbs) (child: nose reshaping, etc). It allows readers to find the top cosmetic procedure (largest area) and understand the distribution of each procedure and body section.

The mark used is area, the channels used are colour hue for categorical value (body sections) and area for quantitative value (counts).

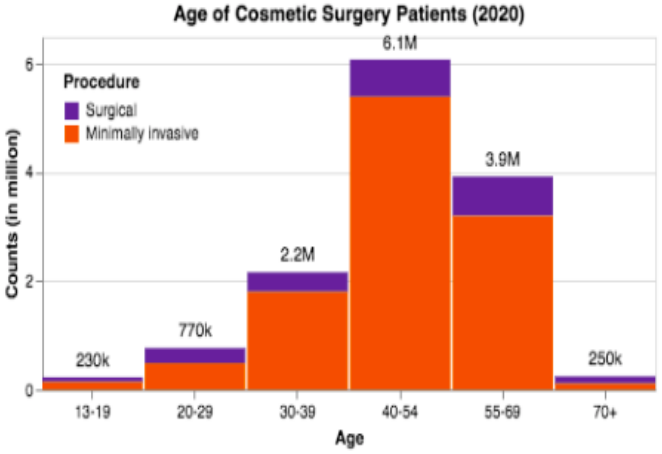


Figure 7. Age distribution of cosmetic surgery patients

I used a stacked histogram (Figure 7) since a histogram is used to show distribution. It allows readers to see the age distribution of cosmetic surgery patients, lookup values, and find the minimum and maximum age.

The mark used is line, the channels used are colour hue for categorical value (procedure), spatial region, and length for quantitative value (counts).

I used a pie chart (Figure 8) since it's a part to whole relationship. It allows readers to see the percentage of male/female patients.

The mark used is area, the channel used are angles, colour hue for categorical values (gender), and area for quantitative values (percentage).

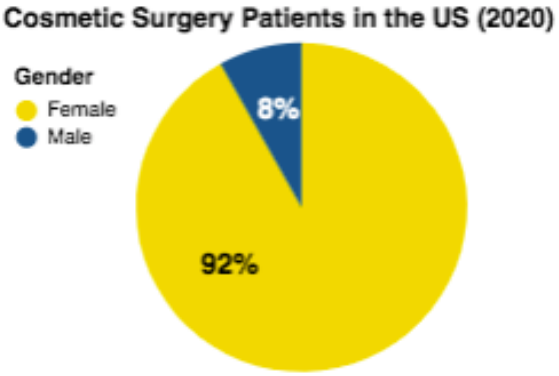


Figure 8. Cosmetic surgery patients gender

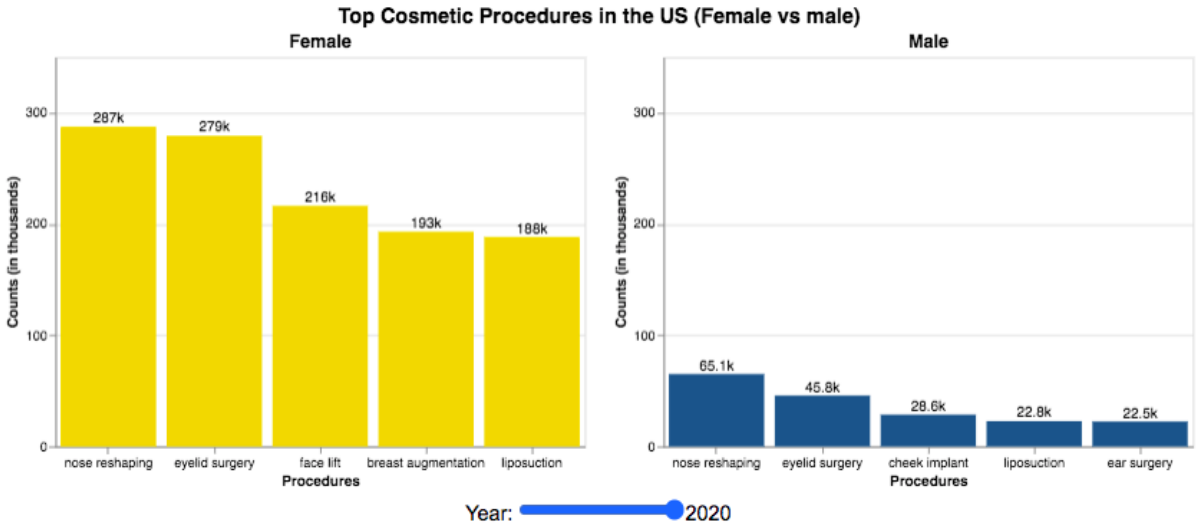


Figure 9. Female & male cosmetic procedures

I chose bar chart (Figure 9) as bar chart is useful to show comparison, allow readers to compare, look up counts of each procedure. There's a year slider to look at yearly changes.

The mark used is line, channel used are spatial region and length for quantitative values (counts).

DESIGN

LAYOUT

Figure 10. Dashboard layout

I centre aligned the visualisations and justified text to create imaginary closure. The texts are 1 or 2 columns with the same width to make it uniform. The sight lines are minimal (red lines, figure 10) to stabilise and enhance the layout so it looks neat, more pleasing to the eye. The heading is centre aligned to create symmetry. I separate the page into 5 containers so it won't be too long. The visualisations are arranged evenly to ensure balance. I filled the dashboards with enough visualisation and text so it has minimal white space but not too crowded.

COLOUR

I chose a light blue background, not too dark so the visualisation will stand out, but not too bright that it'll merge with the white page. The heading is white and the subheading is blue to make it stand out. The text body is black, with colourful text and red annotation to show important information.

I used contrasting colours for different categories (ex: purple for surgical, orange for minimally invasive) so it's easily distinguishable. I used yellow for female, blue for male as to not use the stereotypical pink-blue. I used the same colour hue for the same item throughout all the visualisations and texts to not confuse readers and allow readers to easily identify the item (ex: yellow for female).

FIGURE GROUND

I used blurriness and colour contrast to distinguish figures from ground and create visual hierarchy. The visualisation is colourful with white page background to make the visualisation stand out. The header background is dark and blurry while the header is white and sharp, creating contrast, first thing readers see.

TYPOGRAPHY

I only used 2 font styles: Arial and Bebasneue to keep it simple. Bebasneue for the heading to make it stand out, Arial for the texts as it's readable. I create hierarchy by variation in typography. Large font size, bold, all capital letters for the heading to make it stand out, first thing readers read. The subheading has smaller font size than the heading, all subheadings have the same typography to make it uniform. The title and legend title for the visualisation is black and bolded to emphasise it, the axis title has the smallest size to tone it down.

The heading is centre-aligned, the subheadings are left-aligned, and the text body is justified to create balance and slight variation to make it look more eye-catching.

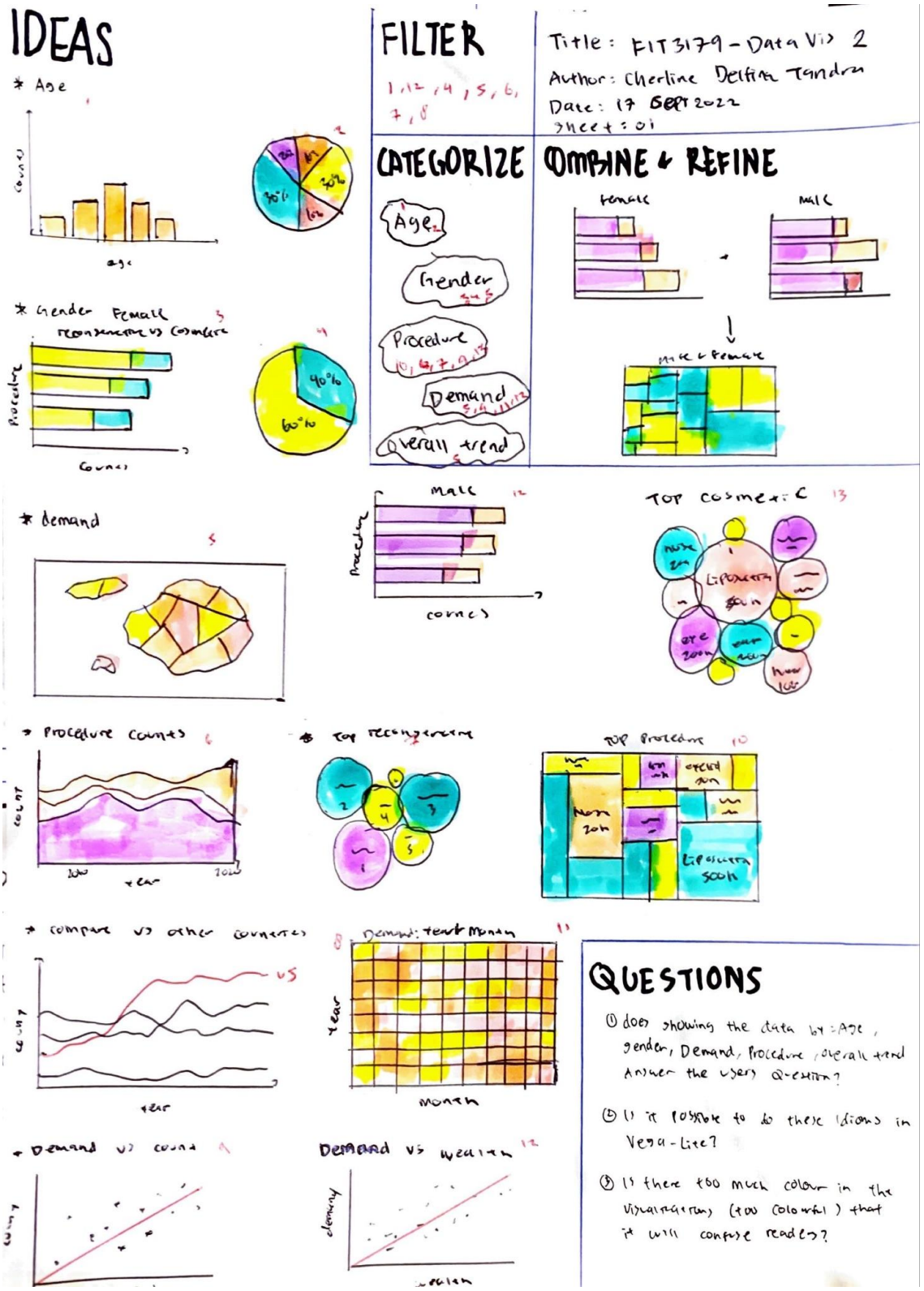
STORYTELLING

I separate the page into 5 containers on different sections (intro, overall plastic surgery, reconstructive surgery, cosmetic surgery, and age distribution). It's neatly organised so it'll be easier for readers to look up information. There's also text for each visualisation that explains the data and red text annotations to show important information.

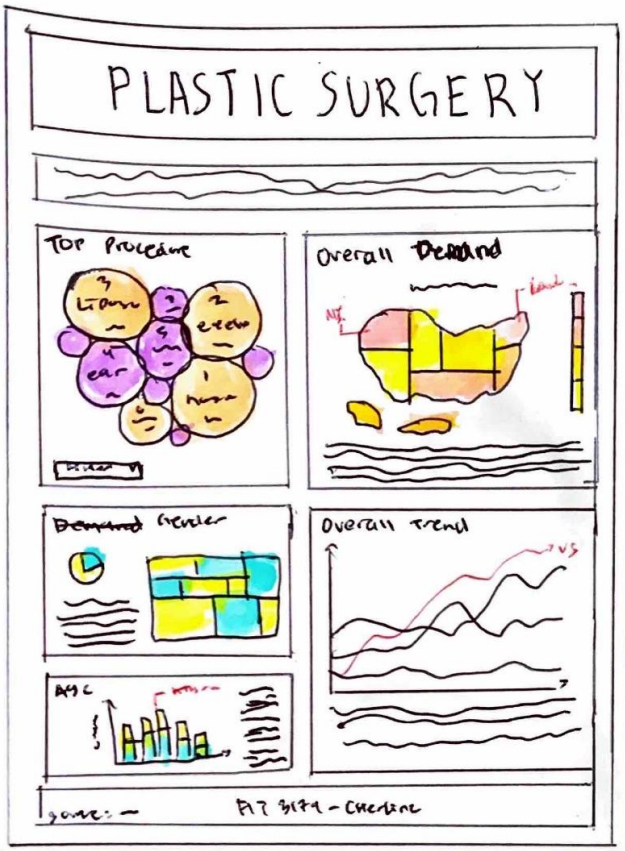
REFERENCE

ASPS (2020). Plastic Surgery Statistics. Retrieved from https://www.plasticsurgery.org/news/plastic-surgery-statistics

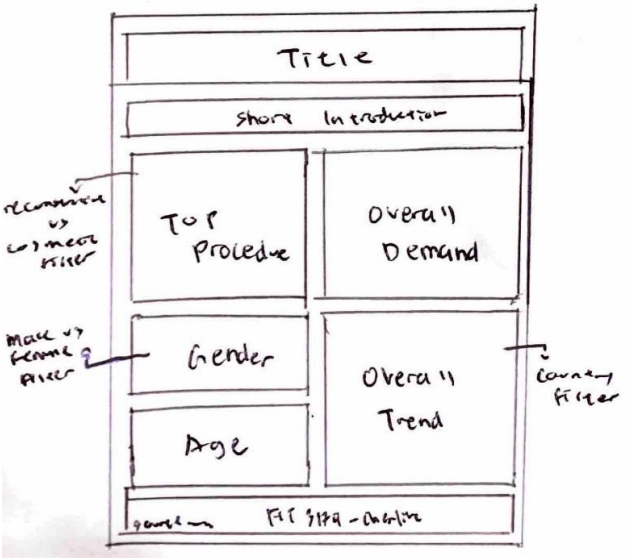
APPENDIX


IDEAS
* Age
count
age
FILTER
1, 12, 4, 5, 6, 7, 8
Title: FIT3179 - Data Viz 2
Author: Cherline Delfina Tandra
Date: 17 Sept 2022
Sheet: 01
CATEGORIZE
Age
Gender
Procedure
Demand
Overall trend
COMBINE & REFINE
female
male
male & female
* Gender Female
Procedure
count
40%
60%
male
Procedure
count
TOP cosmetic
* Demand
* Procedure counts
count
year
* compare vs other countries
US
count
year
Demand: Year Month
year
month
Demand vs count
Demand vs Wealth
country
wealth
QUESTIONS
① does showing the data by: Age, gender, Demand, Procedure, overall trend Answer the users Question?
② Is it possible to do these Idioms in Vega-Lite?
③ Is there too much colour in the visualisations (too colourful) that it will confuse readers?

LAYOUT

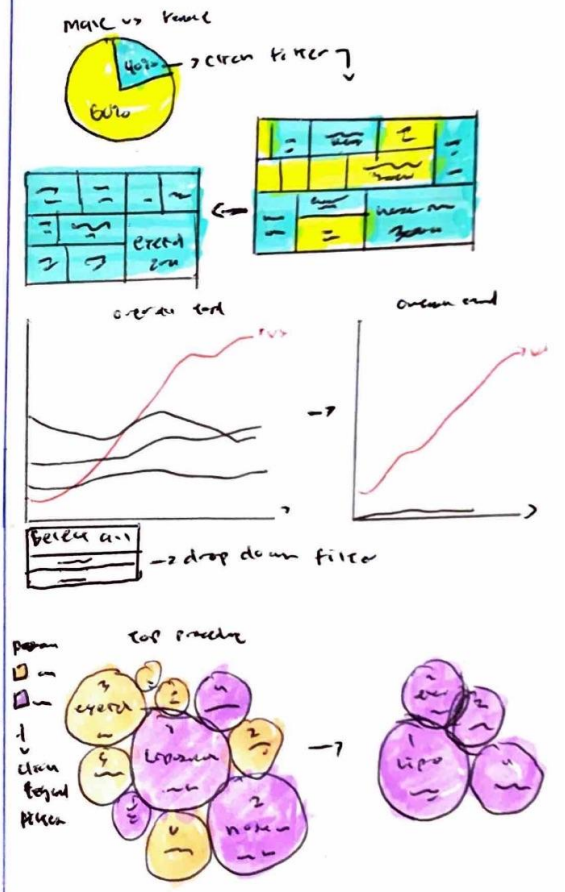


FOCUS



Title : FIT 3179 - Data Vis 2
Author: Cherline Delfina Tandra
Date: 17 Sept 2022
Sheet: 02

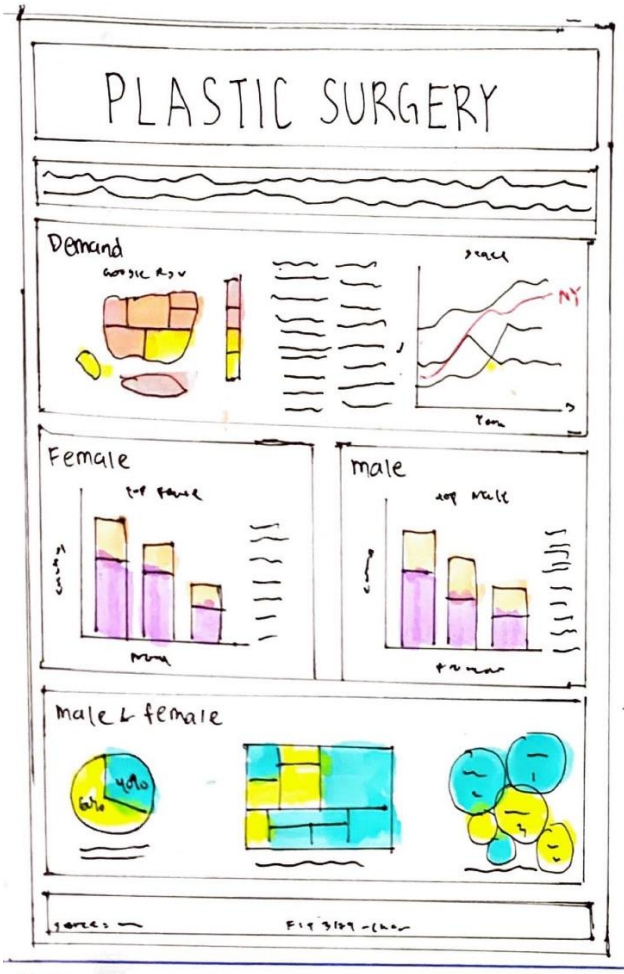
OPERATION



DISCUSSION

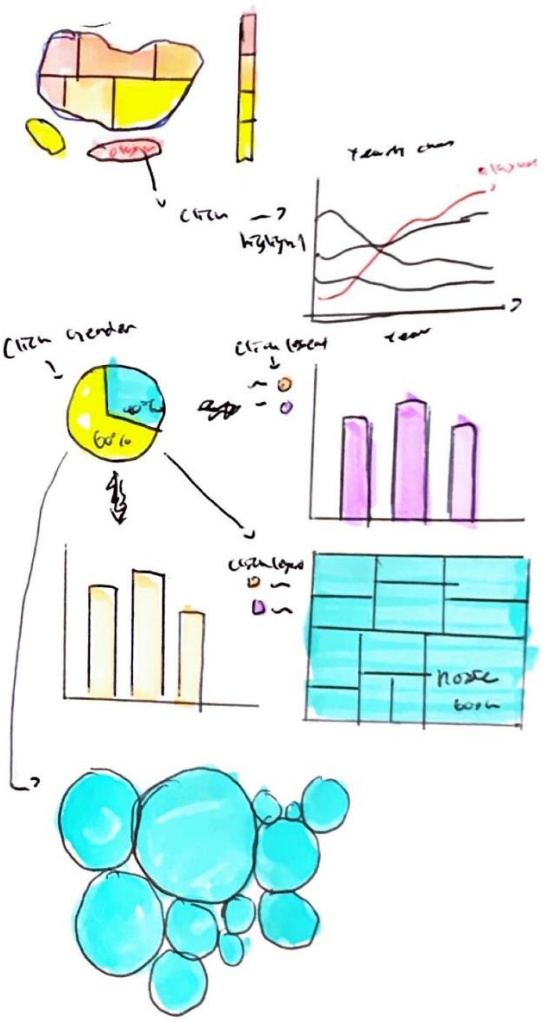
* Uniform colour theory not visualization
+ legend & drop down select filter to make it interactive
* simple clean container layout based on categories for easier navigation
* Try to use less colour to make it not confusing

LAYOUT



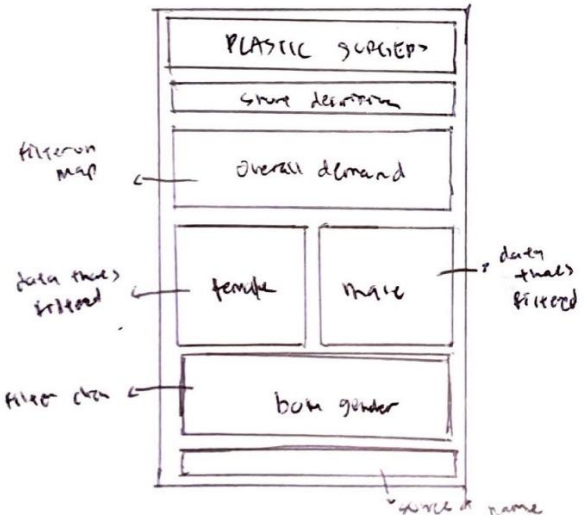
Title: FIT 3179 - Data VIS 2
name: Cherline Delfina Tandra
Date: 17 SEPT 2021
Sheet: 03

OPERATION



FOCUS

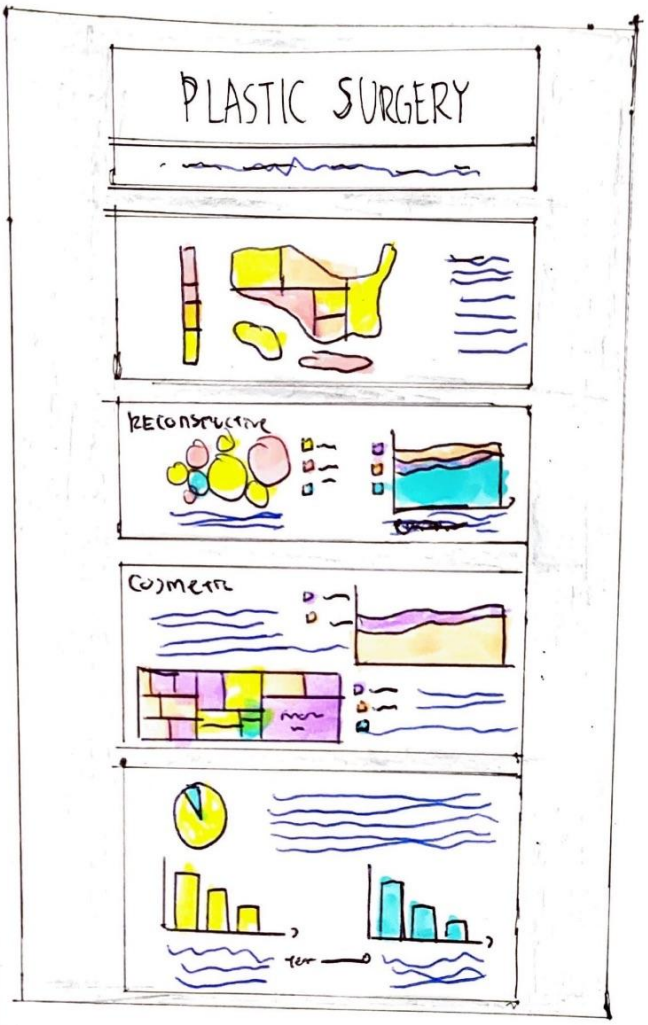
* focus is on Gender



DISCUSSION

* uniform colour throughout dashboard
* filter on map & pie chart
* simple & clean & container layout, center & justified aligned
* use minimal colour to make it less confusing
* use light page background & dark fill background to emphasise

LAYOUT



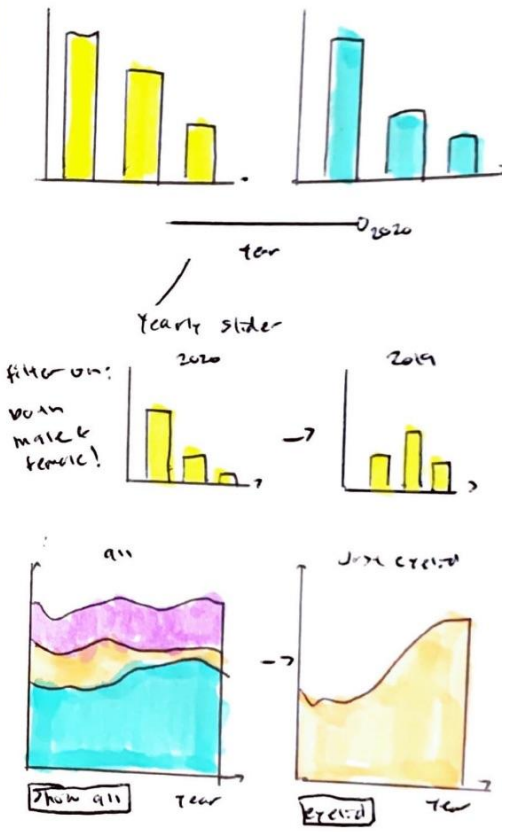
Title: FIT 3179 - DATA VIS 2

Author: Cherline Delfina Tandra

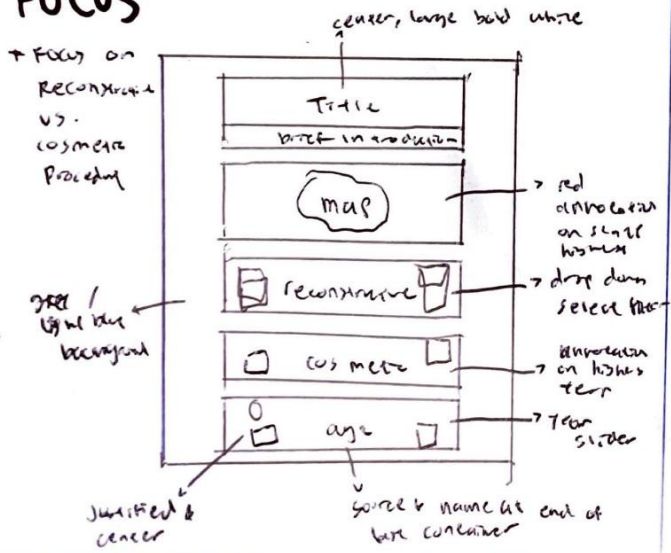
Date: 17 sept 2022

Sheet: 04

OPERATION



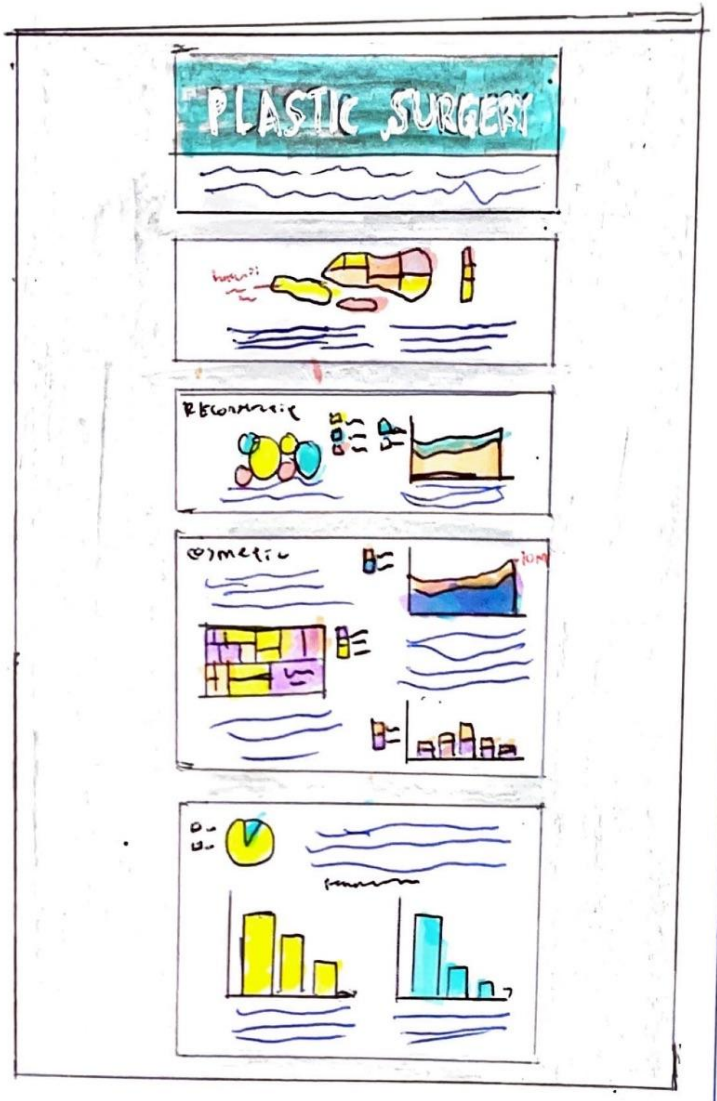
FOCUS



DISCUSSION

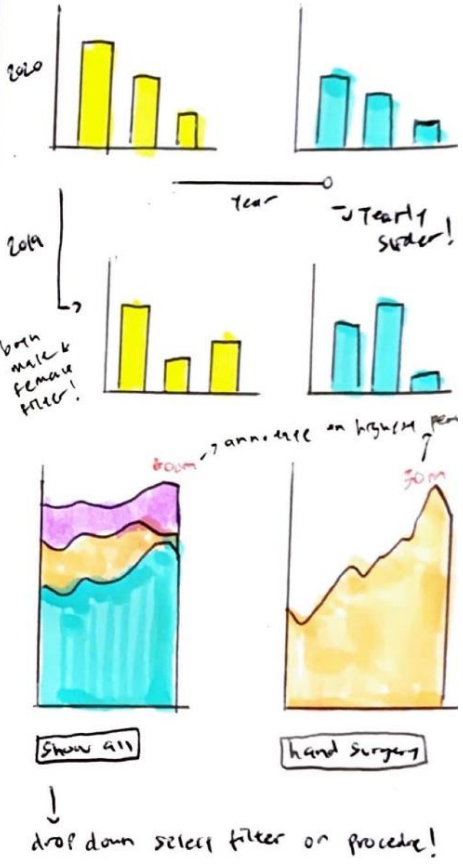
* 10 words per line rule! → seperate long lines into 2 columns & adjust page width
* light grey / light blue background to tone it down
* uniform colours on all visualisations & text!
* red annotation, bold!

LAYOUT



Title: FIT 3179- Data Vis 2
Author: Cherline Deltom Tandra
Date: 17 Sept 2022
Sheet: 05

OPERATION



DETAILS

>> Software

- Vega
- Vega-lite } visualisation
- HTML
- CSS } dashboard web page
- GitHub → save all files inc. HTML

>> Dependent

- D3

>> Estimated time

~~Task~~	Time taken
• Tidy dataset	: 2 days
• Create visualisation	: 1 - 2 weeks
• Write text	: 3 days
• Create interactive	: 1 week
• Create HTML page	: 3 days

>> Dataset

- US plastic surgery (ASPS) American Society of Plastic Surgeons)