

Title: FI3179 Assignment 2

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Date: 15.09.2025

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2. Filter

- ⑪ To many node which would result in too many connections making the figure cluttered and unreadable.

1. Ideas

① dot map



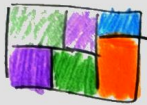
② Choropleth map



③ Proportional Symbol map



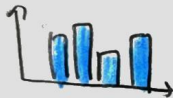
④ Treemap



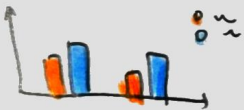
⑤ Pie chart



⑥ Bar Chart



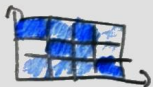
⑦ Grouped bar chart



⑧ Pictogram



⑨ Heatmap



⑩ Line chart



⑪ network Graph



3. Categorise

① ② ③ - show location data about plane crashes

④ ⑤ ⑥ - show categorical values based on number of crashes.

⑦ ⑧ - for survival rate based on seating location.

⑨ ⑩ - showing trend of number of crashes across the years.

4. Combine and refine

⑥ ⑩

Crash Number



- use bar chart to show number of crashes per year

- use line to show rolling average every 5 years.

5. Questions

- where does the plane crashes occur?
- what is the reason for the plane crash?
- How many plane crashes?
- Where is the safest seat on the plane?
- What are the plane types?
- Who are the operator?

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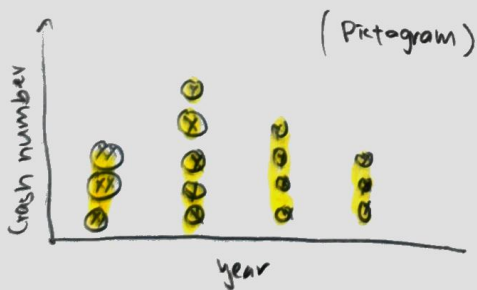
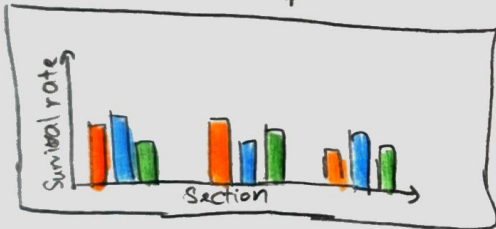
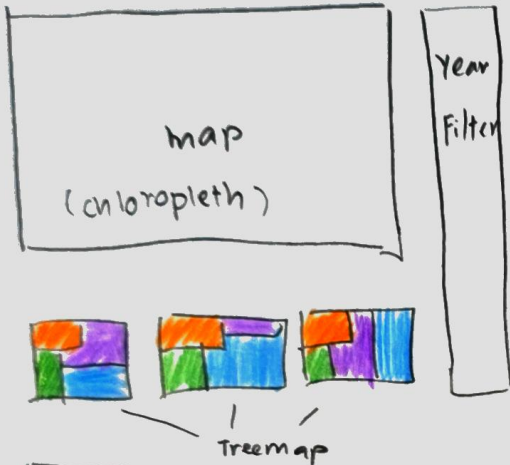
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Layout

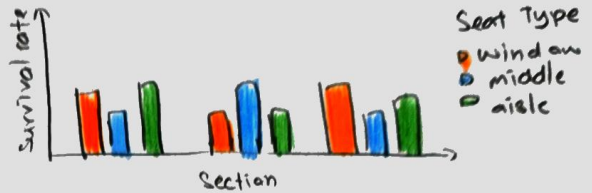
Title



Focus



- Size determined by number of crashes
- label is the operator name
- colour hue for different operator



- Grouped bar chart
- colour hue for different seat-type



- pictogram
- use plane symbol to represent crashes

Operations

- Year filter for map and 3 treemap - all linked together
- Tooltip will show when the marks in any idiom is hovered over.

Discussions

Pros

- + Pictogram is visually appealing

Cons

- + chloropleth map loses lat lon data
- + Treemap might be hard to understand for normal viewers

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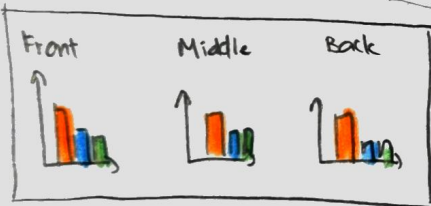
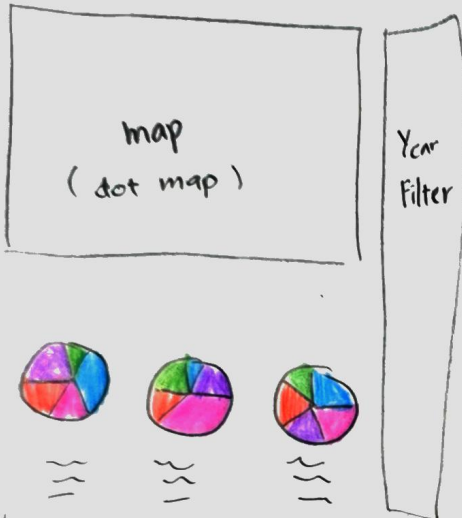
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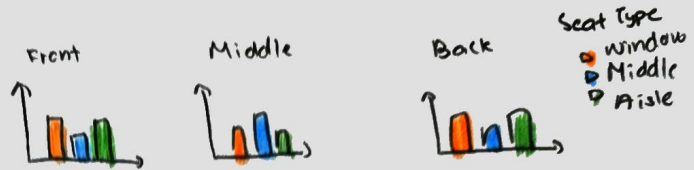
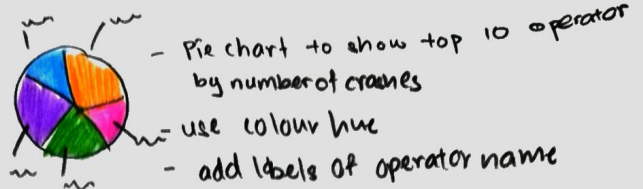
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Layout

Title



Focus



- Use three bar charts to show the different section's survival rate
- use colour hue to differentiate seat type
- share the same legend

Operations

- Year Filter for map and 3 pie charts - all linked together
- Tooltip will show when the marks in any idiom is hovered over.

Discussions

Pros

- + Simple idioms, easy for user to understand
- + year filter allow user to view specific year and compare

Cons

- + Pie charts might be not suitable if there are no major difference between categories or one category dominates as it makes it hard to see the difference.

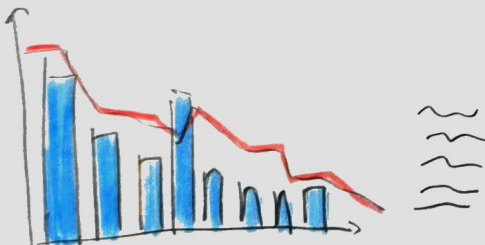
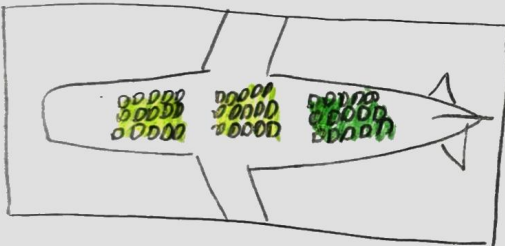
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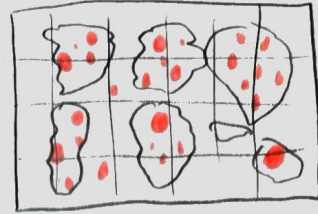
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Layout



~ ~ ~ - metadata

Focus



- equirectangular projection
- proportional symbol map

- contain graticules, ocean background and labels
- Size of dot based on number of fatalities.



- darker means higher survival rate
- use green with colour saturation
- add annotations for each specific section

- Use larger font for highest and lowest survival rate sections

Operations

- Year Filter (for map and 3 bar charts - all linked together)
- Tooltip for when hovering over marks

Discussions

Pros

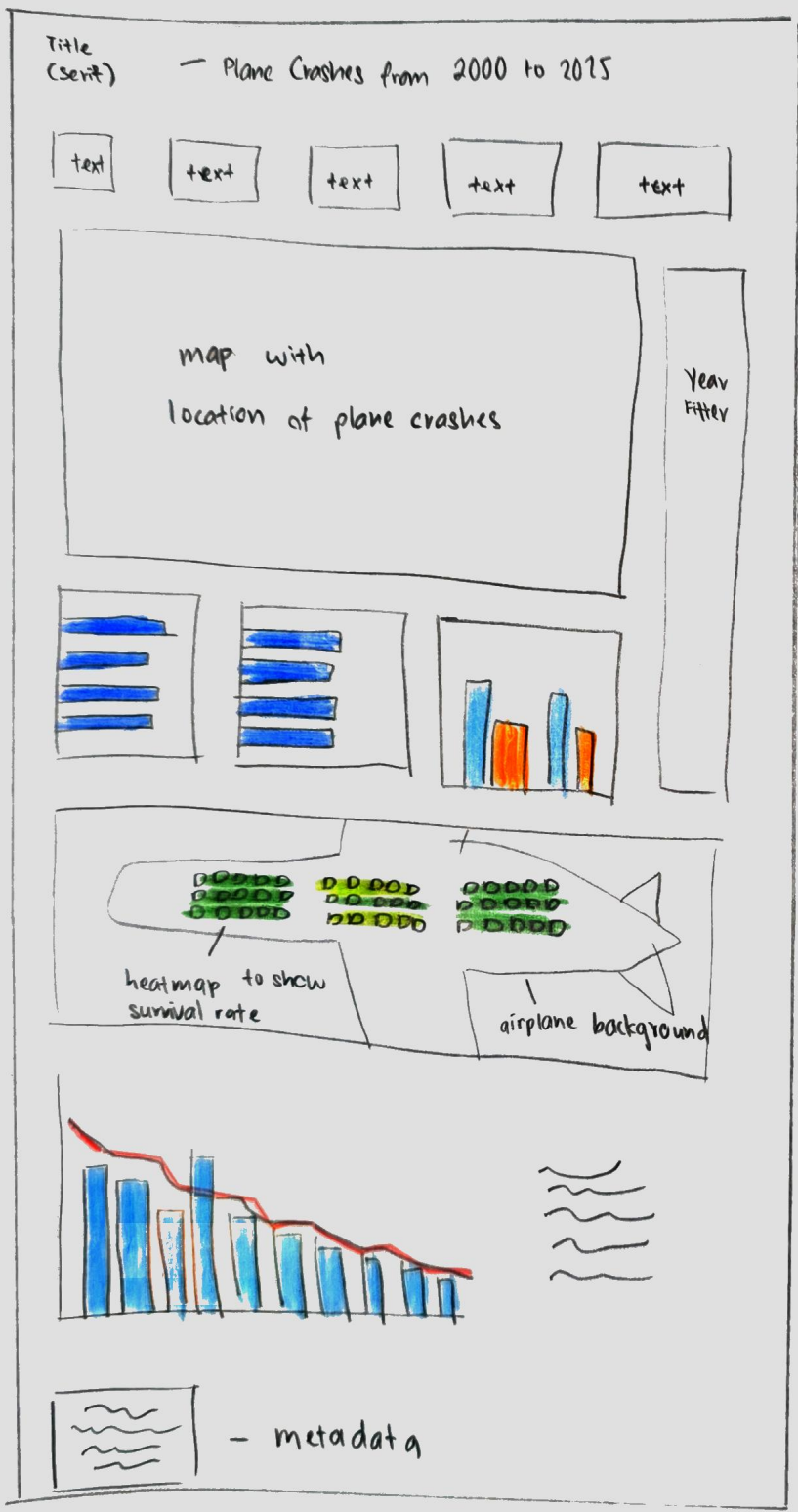
- + Simple idioms, easy for user to understand
- + Heatmap overlaid on plane image is visually engaging
- + Filter allows user to compare between different years

Cons

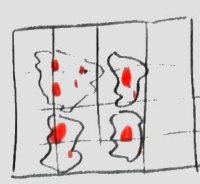
- + Proportional symbol map might be unsuitable if dataset contain too many dots.

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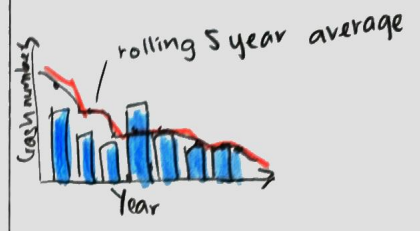


FOCUS



- use equirectangular projection
- proportional symbol map

- add graticule, ocean background, and ocean labels
- Size of dot based on number of fatalities



Operations

- Year filter applies to map and 3 bar chart.
- Hovering over marks will reveal tooltip
- map will show current selected year as red and others as grey for the marks

Details

Dataset

- Plane crash information with lat lon data scraped from plane crash info
- survival rate at plane seat location.

Dependencies

- VegaLite
- HTML, CSS, Js
- Github for deployment
- Inkscape for plane drawings

Estimate

cost : \$ 0

Time to build : 1 week