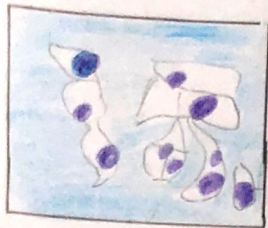
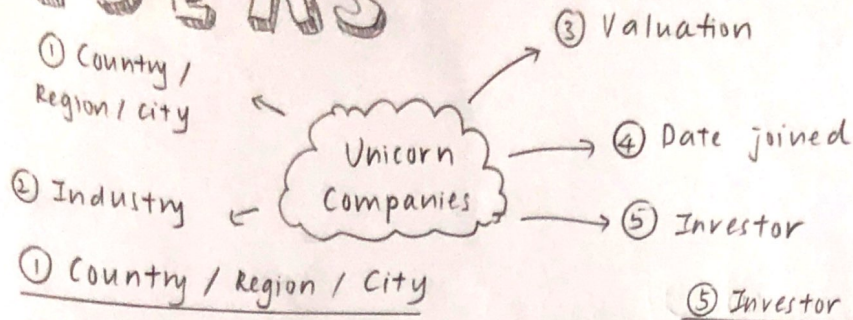
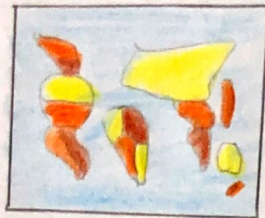


IDEAS



① Proportional symbol map

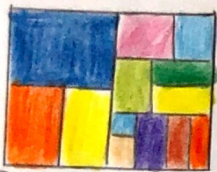


② Choropleth map

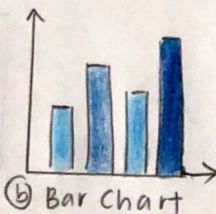
TWO FIVE
ONE SEVEN
FOUR THREE
SIX

Word Cloud

③ Industry



① Treemap



② Bar Chart

③ Donut chart



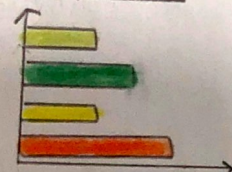
④ Radial bar chart



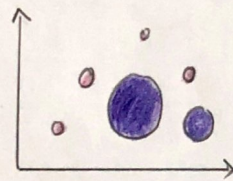
⑤ Polar area chart



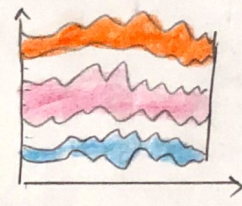
③ Valuation



① Horizontal bar chart

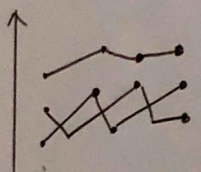


② Bubble plot



③ Stream graph

④ Date joined



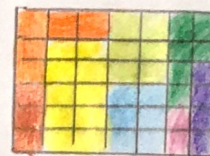
① Line chart



② Radial histogram/barchart



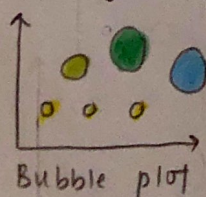
③ Radial line graph



④ Heatmap

4. COMBINE AND REFINE

① Valuation + Date joined



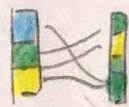
Bubble plot

② Valuation + Country OR Valuation + Industry



Sunburst diagram

③ Industry + Country / Region / City



Alluvial diagram



Chord diagram



Multi-level Donut chart

TITLE: UNICORN STARTUP

AUTHOR: 001 HVI XIA

DATE: 18/9/2025

SHEET: 1

TASK: Brainstorming

2. Filter

- Choropleth map
→ Needs data normalization (Tricky since there is no clear denominator, such as population)

- Treemap
→ Might struggle to clearly highlight small differences / comparisons

- ② Radial bar chart
→ Maybe not supported in Vega Lite

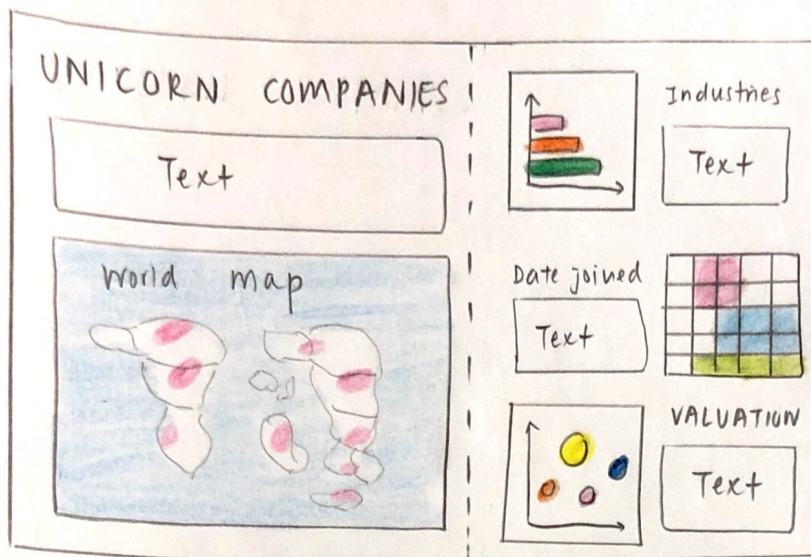
3. CATEGORISE

- Categorical data
→ Country, Industry, Investor
- Quantitative / Ordinal
→ Valuation, Date joined
- Breakdowns
→ Highlight top 10 by country / industry

5. QUESTIONS

- ① Can the selected charts built using Vega-Lite?
- ② What steps are needed for data preprocessing and cleaning?
- ③ Do the chosen visuals strike the right balance between clarity and complexity?

LAYOUT



TITLE: UNICORN STARTUPS

AUTHOR: DOI HUI XIA

DATE: 18/9/2025

SHEET: 2

TASK: INITIAL DESIGN

OPERATIONS

Interactions:

- Map Selection: Clicking a country on the map applies to filter all charts



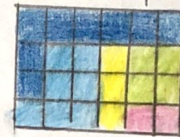
Effects on Charts:

① Bar chart



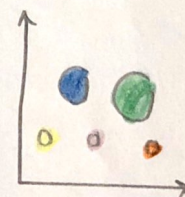
- Highlight only the selected country; others fade out

② Heatmap



- Keeps the chosen country coloured; while the rest dimmed

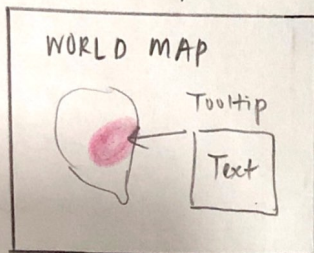
③ Bubble plot



- Update dynamically based on the selected country

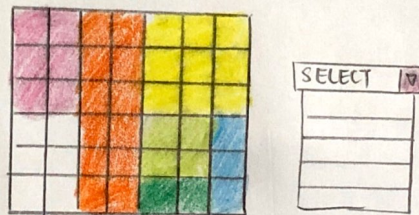
FOCUS

① World map



- Show an interesting fact about the selected country in the tooltip
- User can zoom in/out

② Heatmap + Filter



- Add a dropdown box to filter by country or by date for more targeted exploration

DISCUSSIONS

😊 Advantages

- The landscape format makes it possible to view the whole visualizations at once (without scrolling)
- Clear explanatory text supports easier interpretation of the visuals

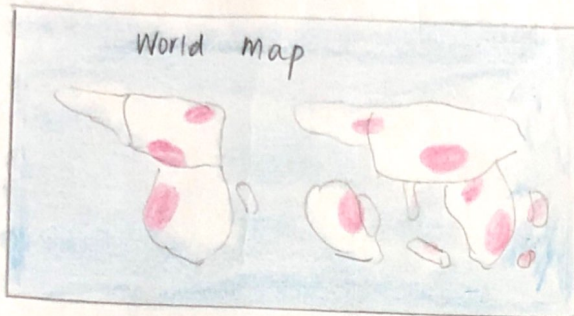
😞 Disadvantages

- Excessive text might distract the reader from the charts themselves
- Adding more visual elements would enhance the overall representation of the topic

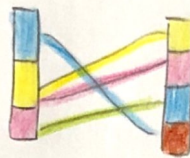
- The dashboard is interactive (selecting a country on the map dynamically filters all the charts to show data related to that country)
- This helps users easily compare and understand

LAYOUT

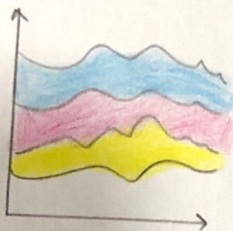
UNICORN STARTUP COMPANIES



INDUSTRY



VALUATION



INVESTOR

ONE FIVE
SEVEN TWO
FOUR SIX
EIGHT

TITLE: UNICORN STARTUPS

AUTHOR: 001 HUI XIA

DATE: 18/9/2025

SHEET: 3

TASK: ADD FILTER

OPERATIONS

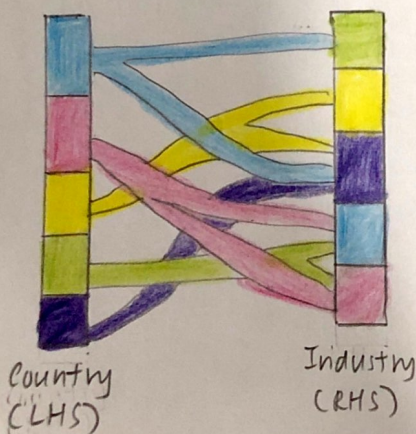
- Selection menu

SELECT	▼

- Provide a drop-down/filter menu that lets user to apply filters across all charts at once.
- This ensures consistency in what data is being viewed, and make it easier to compare patterns across different visuals.
- Legend - Based Interaction
 - option 1 ■ option 2
 - option 3 ■ option 4
- ★ This dual approach (menu + legend) makes the dashboard more flexible

FOCUS

Alluvial chart:



- Can be limited to Top 10 countries with the largest number of unicorn startups
- Hover interaction can emphasize / darken the chosen country / investor

DISCUSSIONS

😊 Advantages

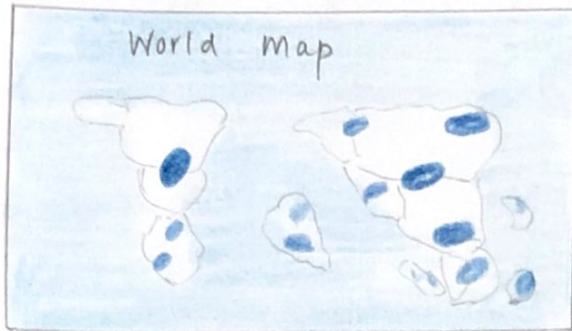
- This layout makes it possible to add more charts
- Filter and selection features introduce interactivity

😞 Disadvantages

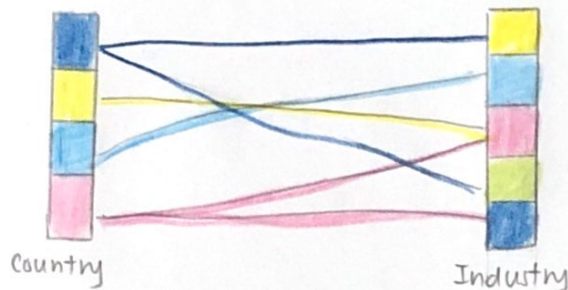
- Word cloud may not provide much insight and could be replaced with other.
- The alluvial chart should be placed in the centre

LAYOUT

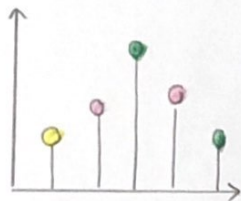
UNICORN STARTUP COMPANIES



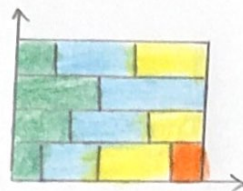
ALLUVIAL - TOP 10 COMPANIES



VALUATIONS



INVESTORS



FOCUS

Lollipop chart



- Annotations
 - Add short text notes directly on the chart to highlight key insights
- Colour usage
 - Emphasize the important category with distinct colour; others in grey

TITLE: UNICORN STARTUPS

AUTHOR: 001 HUI XIA

DATE: 18/9/2025

SHEET: 4

TASK: IMPROVE INTERACTIVITY

OPERATIONS

- Hover effect
 - On alluvial and bar chart, the hovered segment becomes darker to emphasize it
- Legend filtering
 - option 1 (blue)
 - option 2 (pink)
 - option 3 (yellow)
 - Selecting a legend item highlights the chosen category while dimming the rest

DISCUSSIONS

😊 Advantages

- Using dividers helps structure the visualization (easier for readers to distinguish)
- Interactive elements (like hover effects/filters) increase engagement
- Central placement of main charts (improve focus)
- Text annotations add clarity

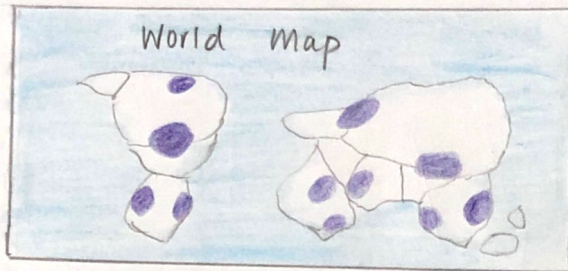
😞 Disadvantages

- Long industry names make legend take up too much space
- Large legend can reduce readability and clutter the layout

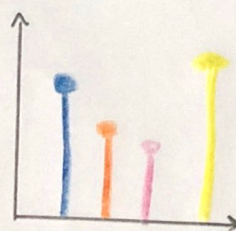
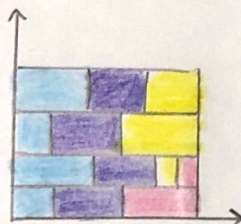
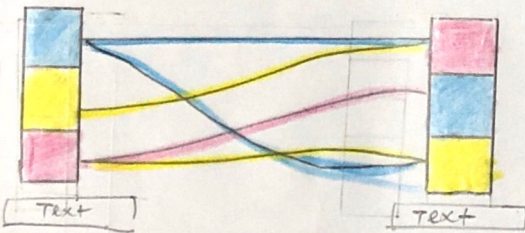
LAYOUT

UNICORN STARTUPS

introduction



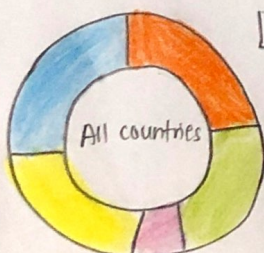
Text



(based on sheet 4)

FOCUS

Donut Chart:



- When a country is selected, display the industry breakdown for that country
- By default, show the overall industry distribution (all countries)

TITLE: UNICORN STARTUPS

AUTHOR: 001 HUI XIA

DATE: 18/9/2025

SHEET: 5

TASK: FINALIZATION DESIGN

OPERATIONS

- ① Highlight on hover
- ② Show tooltip
- ③ Filter using dropdown menu
- ④ Add text annotations
- ⑤ Use legends for selection

DETAILS

① Dataset

- Source: Kaggle (CSV format, unicorn startups)
- Attributes: company name, valuation, founding date, industry and investor

② Data cleaning

- Need aggregation functions
- Tools: Excel, Jupyter Notebook
- Visualisations: Vega-Lite/Vega

③ Timeline

- Data cleaning (3 day)
- Building charts (6/7 days)
- Dashboard (HTML + CSS) → 4 days
- Design (2 day)

- ★ Make sure to push everything to GitHub after completing each task
- Deadline: 19/10/2025