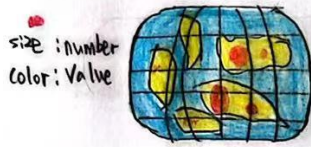
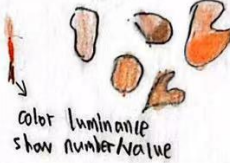


Idea:

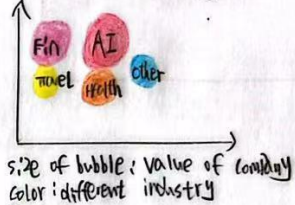
① Proportional symbol map:
show the total number, total valuation of unicorn companies in each country.



② Choropleth map:
show countries colored based on number of unicorn / value



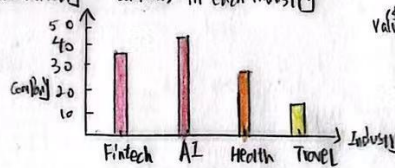
③ Bubble chart:
Relationship between industry & valuation
distribution of industry



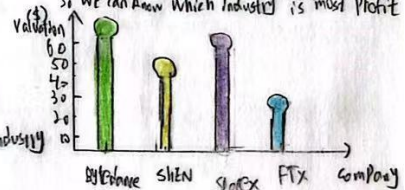
④ Pie chart:
distribution of unicorn companies across industry



⑤ bar chart:
show the count of unicorn companies in each industry



⑥ Lollipop chart:
show some most valued companies
So we can know which industry is most Profit



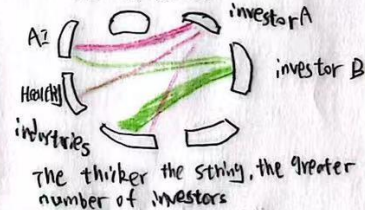
⑦ Sankey chart:
show the flow of companies to industries



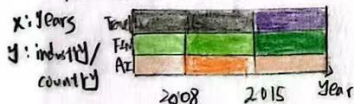
⑧ Tree map:
show proportional size of different industries in terms of number of unicorn / valuation



⑨ chord diagram:
show relationship between investors and industries



⑩ Heat map: show the density of unicorn company formation over time



⑪ Radar chart: Compare different industries across number of unicorn companies.



Filter:

Redundant Ideas:

- ①, ② both show location data
- ②, ③, ④ both show distribution of industry
- ③, ④, ⑤ both can show valuation
- ④, show investor
- ⑩, show formation year, but change other chart variable can also do this

Categorize

Location analysis:

①, ②

Number of unicorn company:

①, ②, ⑤

Valuation of unicorn company:

②, ③, ⑤ (if change variable)

Distribution of industry:

②, ③, ⑤, ⑦, ⑧

Investor: ⑨

Year: ⑩

Combine & refine

① & ②



⑦ & ⑨

⑤ & ⑥

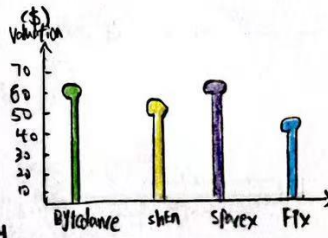
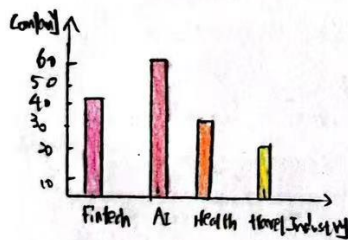
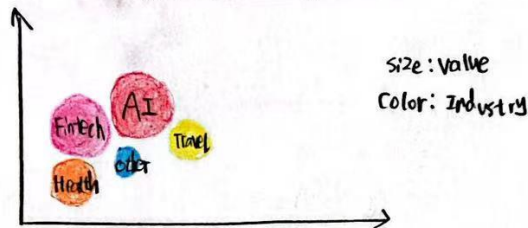
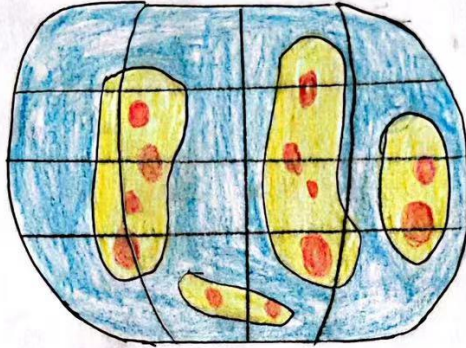
Refine: Display both number of unicorn companies in each country and the country's industry distribution or total valuation.
Bar chart and lollipop chart: lollipop chart show valuation and bar chart show number

Questions:

- Does it show which countries have the most unicorn companies & valuation?
- Which unicorn companies have the highest valuation in their industry?
- Does it show distribution of industries and investor/year?

Sheet 2 Fds

LAYOUT



Title: Worldwide unicorn companies

Author: Yanhao Wang

Date: 25/09/2024

Sheet 1 - FDS 2

Task: Proportional symbol map, bubble chart

Bar chart, Lollipop chart

OPERATION

Allow users to filter by country or industry, allow them focus on specific regions if interested.

Each chart include hover tooltips that provide additional details

DISCUSSION

Advantages:

Start from a global perspective and narrowing down to specific industries and top companies. Provide enough depth for users to explore multiple dimensions. User can click or choose the industry or region they like, is a clear and simple visualization.

Disadvantages:

It may lack depth in exploring investment relationships, didn't cover all the data in the dataset. Some small unicorn companies not include or can be visual in this visualization.

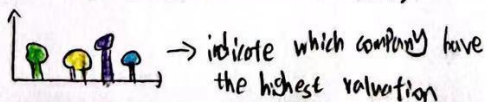
FOCUS

The central idea of this design is to provide users with a global-to-industry level understanding of unicorn companies.

Proportional symbol map provide users a global perspective

Bubble chart shows how different industries contribute to the overall valuation of unicorn companies.

Bar chart is more detail shown us which industries have the most unicorns and allow them to compare industry size and Lollipop chart provide insights into which companies are driving the most values with their industries.



Sheet 3 Fds

LAYOUT

Title: Worldwide unicorn companies

Author: Yanhao Wang

Date: 25/9/2024

sheet 2 — FDS 3

Task: Choropleth map, bubble chart,

Chord diagram, Heat map

OPERATIONS

Filters: Allow users to filter by industry / country / year to drill down to specific sectors. Hover details for each chart to show specific information

DISCUSSION

Advantages: provide data, integrate geographical distribution, investor-industry relations let user know which industry have better future let users know which year which industry is popular.

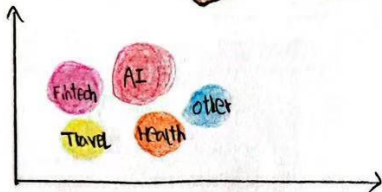
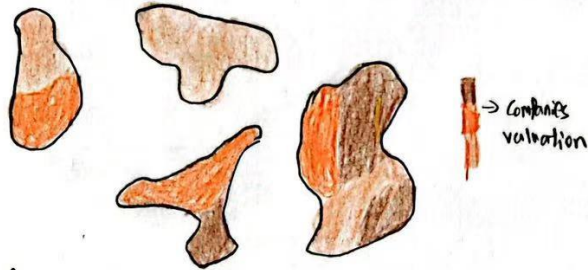
- Layout simple and clean
- Good interaction such as filter

Disadvantages:

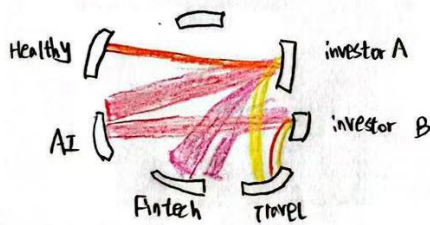
Lacked detail company-level breakdown as it focus on higher-level industry and investor dynamics.

- too much text cause user can't focus on charts.

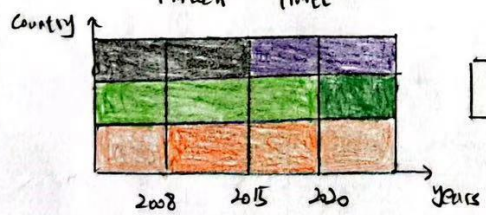
- map can only show one dimension data not like proportional symbol map can show number and valuation



text

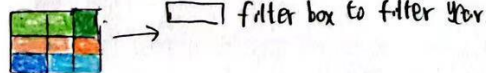
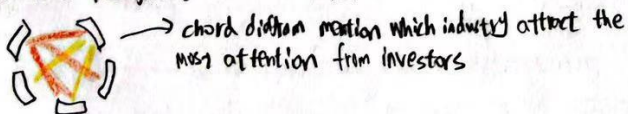


text



text

choropleth map highlights the countries with the highest unicorn valuation offer user which region dominate the global unicorn landscape.



FOCUS

sheet 4 Fds

LAYOUT

Title: Worldwide unicorn companies

Author: Yanhao Wang

Date: 25/09/2024

sheet 3 — FDS 4

Task: Proportional symbol map

Sankey chart, tree map, Radar chart

OPERATION

Filter: user can select a specific country in sankey chart or select a specific industries

Tooltips on each chart, when hover provide detail data for each industry, country.

DISCUSSION

Advantages:

Sankey chart can show the flow and more interesting

Filter and Tooltip Provide detail data.

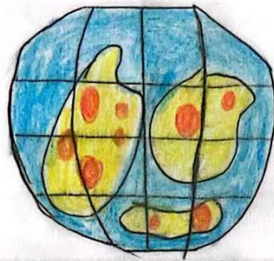
Provide a comprehensive view and radar chart add depth by introducing multi-dimensional performance comparison.

Disadvantages:

Don't include investor, time or detailed company-level insights

Radar chart may be hard to implement.

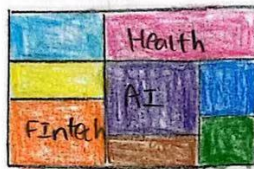
Sankey chart can't include all country, if so, the layout might be compact.



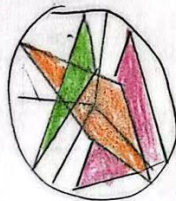
Text



Text

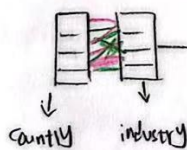


Text



Text

FOCUS



Sankey chart show top 5 countries with the highest number of unicorn companies to observe the flow of industries.



tree map show a overall distribution of industries. A Proportional size of different industries based on the number of unicorns.

Radar chart compare different industries across valuation to find which industries even have bright future.

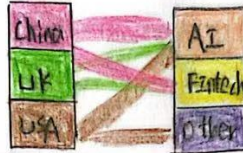
sheet 5 Fds

LAYOUT

Introduction



Text

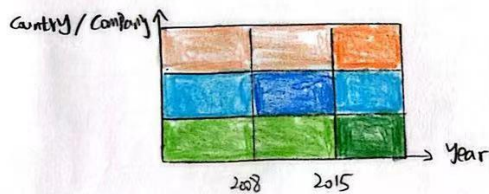


Text



Size: valuation
Color: Industries

Text



Text

Title: Worldwide unicorn companies

Author: Yanhao Wang

Date: 25/09/2024

Task: Proportional symbol map, Tree map, Sankey chart, bubble chart, heat map

OPERATION

Filter: User can filter by country, industry, allowing them focus on specific regions.

Hover Tooltip: hover over country or any chart will show detail data
Sankey chart hover can see a specific flow

DISCUSSION

Algorithm: Symbol size algorithm scales the size of the circle in map, Sankey layout algorithm computes the flow of unicorns across industries.

Colors: A consistent color scheme is critical.

Proportional symbol: A gradient color, and blue for ocean

Sankey chart: distinct color

Tree map: same color follow Sankey same for the rest chart

Software: Vega-Lite, JavaScript, HTML, CSS maybe some website to get the map layer information.

Estimate time:

Proportional symbol map: 1 day

Sankey chart: 2 day

Tree map: 1 day

Bubble plot: 6 hours

Heat map: 1 day

FOCUS

Centre idea: Provide a complete perspective on

unicorn company distribution, industry flow, top company valuations, and time they found, to find is there a good year to start a business.

The Proportional symbol map offers a geographic view

Sankey chart reveals the flow of companies between industries.

Tree map gives proportional comparison of industries and

the bubble chart highlight the most valuable companies

Heat map offers insights into the trends of unicorn formation