IDEAS

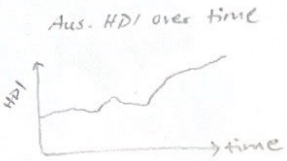
① Map (choropleth)

i) Australia - states

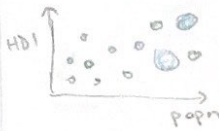
ii) World - countries

② Bar chart

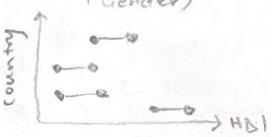
③ Line chart



④ Scatterplot / Bubble

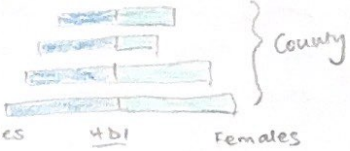


⑤ connected dot plot (Gender)

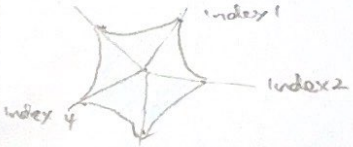


⑥ Treemap (GNI per capita)

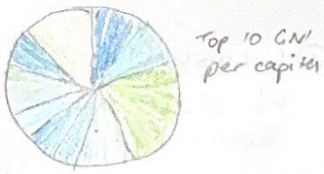
⑦ Butterfly chart



⑧ Radar chart



⑨ Pie / Donut chart



FILTER

③ Line chart
Too simplistic + most countries have quite a boring trend line (small increase every year) ∴ not very informative

④ Pie chart
hard to compare areas in pie format + hard to make more advanced/ customised

② Bar chart
Too simplistic → butterfly chart better alternative.

CATEGORISE

HDI
- HDI → Map (focus) → choropleth ① (i) & (ii)
- 3 Dimensions → Health ⑤ ④ / Income ⑥ ⑨ / Educ. ⑦ ⑧

QUESTIONS

* Are ⑥ and ⑧ doable in Vega-Lite or need Vega?
* Too much data cleaning required for Dimension data?

COMBINE & REFINE

② & ④: ④ better. shows more data + a more complex visualisation.

⑥ & ⑨: ⑥ better. areas easier to compare visually in treemap than pie chart.

⑧: instead of radar chart of all dimensions, seperate chart per dimension (↑ informative).

Author: Mia Liao

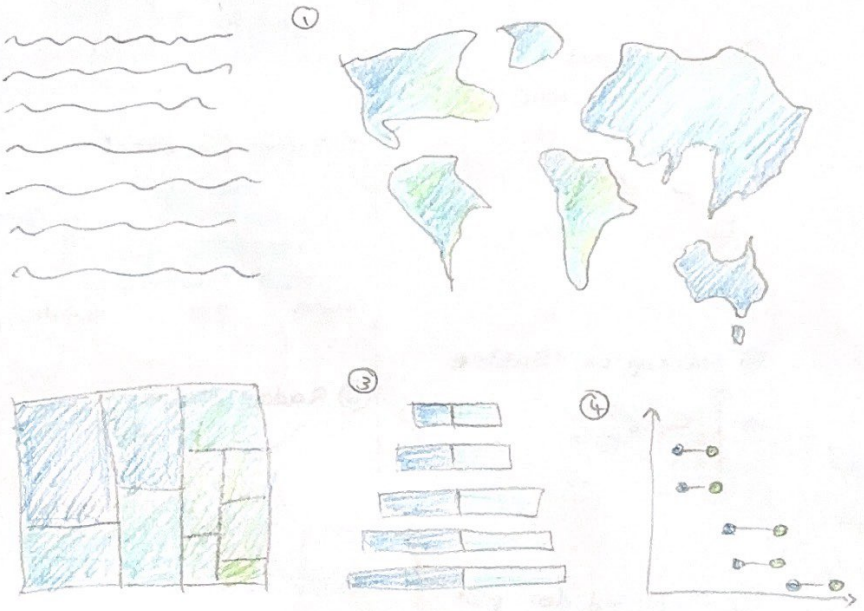
Date: 15/09/24

Sheet: 1

LAYOUT

Title: Partnered Task
Author: Mia Liao
Date: 15/09/24
Sheet: 2

HUMAN DEVELOPMENT INDEX



① Choropleth — HDI of all countries

② Treemap — GNI per capita (Top & bottom 10 countries)

③ Butterfly — expected vs. mean yrs. of education

④ Connected dot plot — Life expectancy (M vs. F)

OPERATION

→ maybe select year for ①

→ filter option ① by continent or HDI category

Tooltips:

① country, HDI

② country, GNI per cap.

③ Expected vs. mean

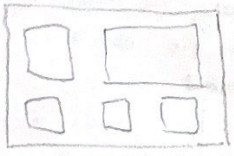
④ gender + life expectancy

FOCUS

→ Focus on map (HDI)

→ then breakdown into 3 dimensions

★ 3 columns



→ allows a deeper dive into dimensions of human development (not just HDI which alone is a bit abstract)

DISCUSSION

Advantages

★ Information on dimensions of HDI (not repeating same data in different visualisations)

★ simple layout with 2 rows - easy to follow

Disadvantages

★ top-right may be heavier weight (need a fair bit of text)

★ need to filter/select countries for ②/③/④ - not fully rep. of all countries

Title: Partitioned Poster

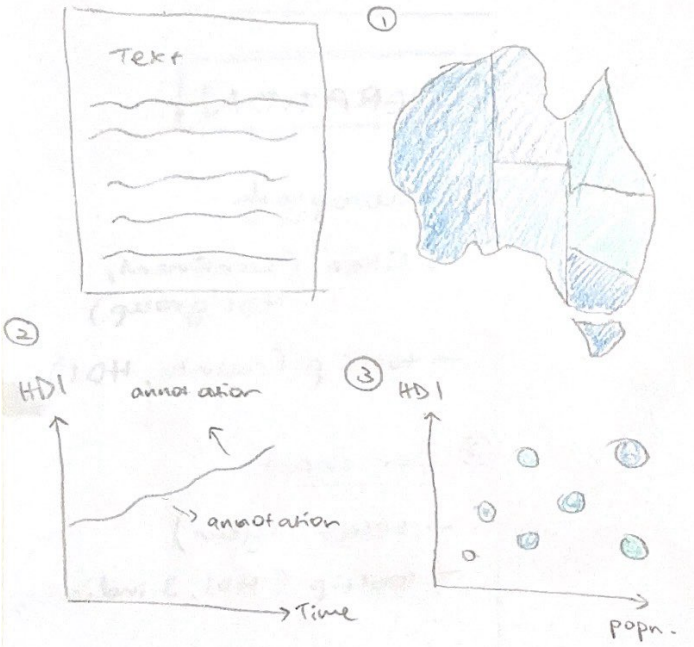
Author: Mia Liao

Date: 15/09/2024

Sheet: 3

LAYOUT

HUMAN DEVELOPMENT INDEX



① Choropleth — HDI by state

② Line chart — Aus. HDI over time

③ Babble plot — HDI vs. state population

OPERATION

① Drop-down selection menu (select year)

① & ③ : option to select state (combined across both charts)

① integrated line graph of state HDI over time?

Tooltip

① view state HDI

② view Aus. HDI every year

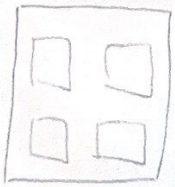
③ view HDI, population

FOCUS

→ simple + easy to follow layout

→ start at top, map = focus
follow down to ② & ③

→ 2 rows, 2 col. (grid)



DISCUSSION

Advantages

* Focus on Australian data only, not too much data to process
* compact structure

Disadvantages

* potentially too simple idioms
* allows no insight into how Australia compares to other countries

Title: Partitioned Poster
Author: Mia Liao
Date: 15/09/24
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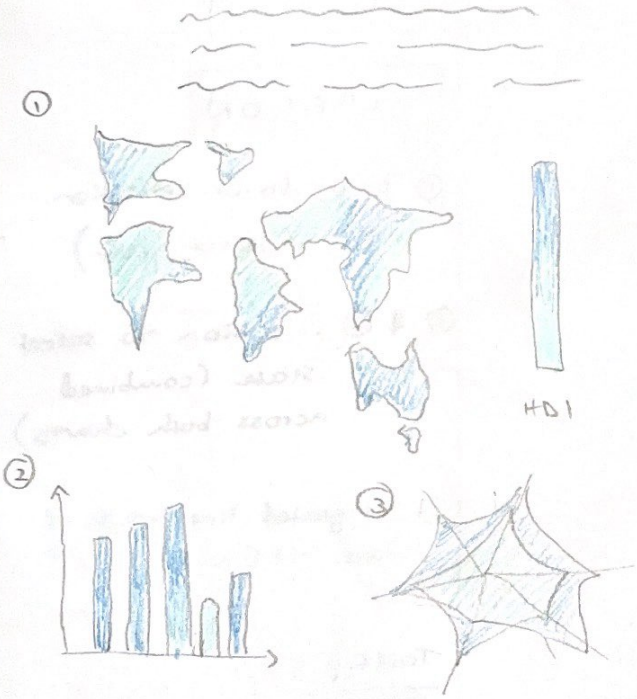
LAYOUT

HUMAN DEVELOPMENT INDEX



① choropleth
global map of countries' HDI

② Bar chart
Aus. states HDI

③ Radar chart
how diff. groups (race, gender) perform in the HDI indicators

OPERATION

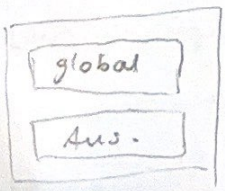
① choropleth
→ filter (continent, HDI group)
→ tooltip (county, HDI)

② Bar chart
→ select (year)
→ tooltip (HDI, 3 indicators)

③ Radar chart
→ select (eg. gender, race, income level)
→ tooltip (group, dimension/indicator)

FOCUS

* Focus on very large choropleth (1)
* 2 main sections:
  → global HDI
  → Australian HDI



DISCUSSION

Advantages

* both global & Aus. data
* mix of HDI & dimensions

Disadvantages

* not much text / room for annotations
* not much crossover between charts

LAYOUT (From Sheet 2)

HUMAN DEVELOPMENT INDEX

Title: Partitioned Poster
Author: Mia Liao
Date: 15/09/24
Sheet: 5

OPERATION

Main interactive function is tooltip:

① HDI, HDI group (low, High, etc.)

② GNI per capita

③ Expected + Mean Years of education

④ Gender, Life expectancy

Selection/Filter Function

① By human development category

FOCUS

→ 2 main sections
  1) global HDI
  2) dimensions of HDI

→ main focus = choropleth

→ storytelling:
  → main para. at top (HDI)
  → smaller text annotations for bottom 3 graphs (explaining jargon, outlies)

DETAILS

Dependencies

→ Vega, Vega-Lite
→ R (data cleaning)
→ Visual Studio

Estimated time & effect

at least 1 day for data wrangling, 3 for idioms, 1 for text/layout

→ 1 day for data wrangling
→ 1 day for choropleth
→ 1 day for idioms ②, ③, ④
→ 1 day for interactivity
→ 1 for text/layout