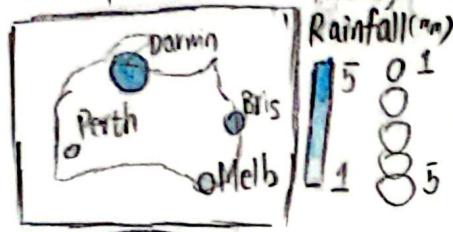


IDEAS

① Proportional Map



Author: INYAN SIU Sheet: 1
Date: 3/10/2024 Task: Planning V2

Filters

⑦ Bubble Chart

100% → Same as ⑧, trying to display the correlation of weather and energy consumption.

⑨ is already repetitive, and ⑩ Show the correlation more directly.

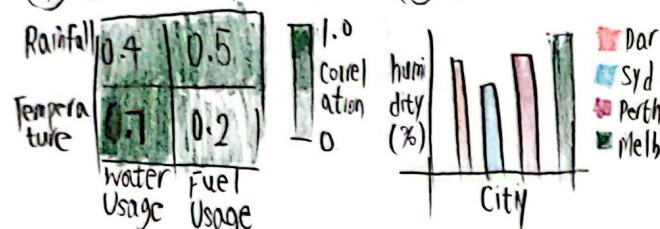
⑩ Donut Chart

⑩ → For showing energy consumption which was already covered by ⑦, yet ⑩ can show the portion of energy consumption more directly, also easier to see the ranking.

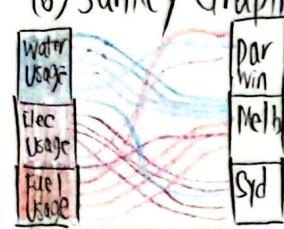
④ Correlation Matrix

	Rainfall	Temp	Water Usage	Fuel Usage
Rainfall	1.0	0.4	0.5	0.7
Temp	0.7	1.0	0.2	0.1
Water Usage	0.5	0.1	1.0	0.8
Fuel Usage	0.7	0.1	0.8	1.0

⑤ Bar Chart



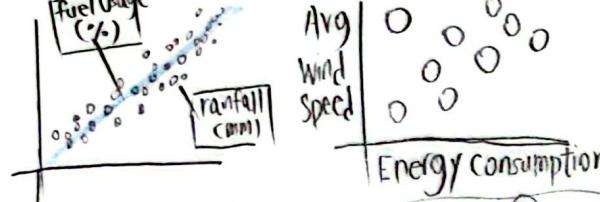
⑥ Sankey Graph



⑦ Tree Map



⑧ Scatter Plot



⑨ Bubble Chart



Question

1) What characteristic of weather does each city has?

→ comparing the weather data of each cities, therefore understand their characteristic.

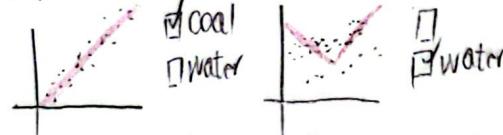
2) What correlation between weather traits and energy consumption?

→ Comparing cities' weather data and energy consumption data, getting the potential correlation between city's weather trait and energy consume.

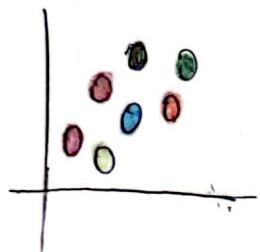
Combining & Refine

1) Combine ⑧s

If there are multiple ⑧ presents for related data, then we can just combine them and let user filter by option.



2) In ⑨ use colours to differentiate nominal data



Categories

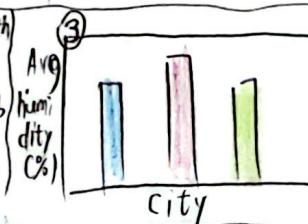
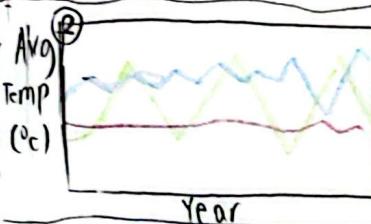
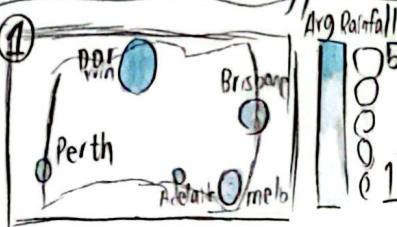
- Weather indicator
 - Average Rainfall (mm)
 - Humidity (%)
 - Average Temperature (°C)
- Energy consumption indicator
 - Electricity consumption (kWh)
 - Coal consumption (J)
 - Water Usage (m^2)
 - Energy mix (%)
 - Energy consumption growth (%)
- Other nominal data
 - cities
 - states
 - climate types

LAYOUT

Weather Pattern of Australian cities and how it affect energy consumption?

Average Rainfall of capital cities

Text comparing the rainfall data of each cities

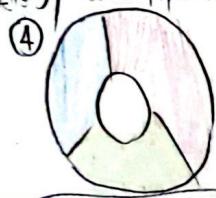


Text comparing the temperature

Text comparing the humidity

Paragraph summarising the weather trait of each city, and classifying their climate type

Energy Consumption (J) By cities



Text describing the overall energy consumption by cities

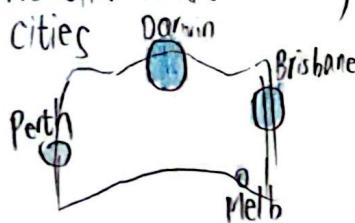
⑤ Energy consumption (J) By cities' Climate Type



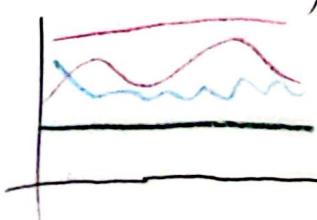
Text describing the correlation between Energy consume and city's climate type

FOCUS

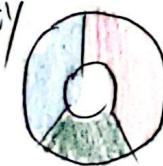
1) Shows the diverse weather condition among cities



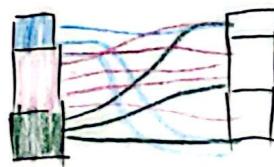
2) Compare the weather characteristic among cities



3) Display the energy consumption of each city



4) Analyse the potential energy consumption - climate correlation

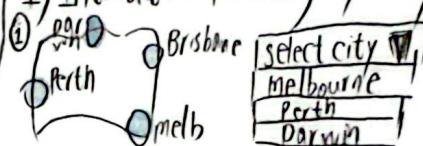


Author: InYan SIU Date: 1/10/24

Sheet: 2 Task: Visualisation 2

OPERATION

1) Interactive filtering by city ①



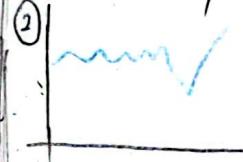
2) Tooltips

For All Graph, has detailed tooltip pop-up when hovered over.



3) Filtering By City ②

when Legend clicked, only show Show that city on the idiom.



②

DISCUSSION

1) The weather characteristic of cities

- Through analysing and comparing the weather data of each city, get their weather characteristic.

2) Climate type of cities

- Using the characteristic we got, find the climate type that most fit the city.

3) Correlation between energy consumption and climate type

- By comparing the energy consumption of each city, find potential correlation between Climate type and energy consumption.

Layout

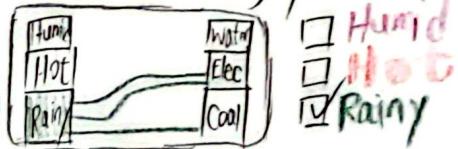
Author: InYan SIU Date: 7/10/2024

Sheet: 3

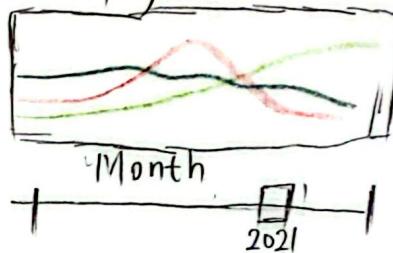
Task: 1/visualisation

Operation

1) For ⑥ filtering by weather

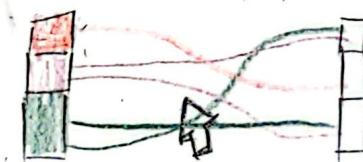


2) Applying Time Slider for ②



3) No tooltips for ⑥

No tooltips provided for ⑥ due to its complex data.

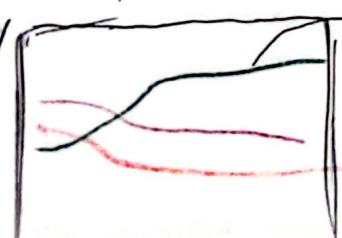


Focus

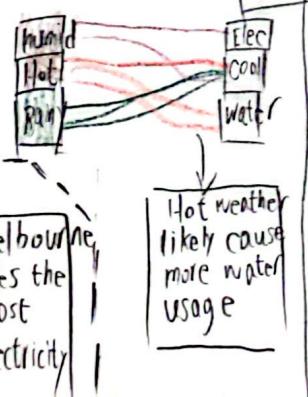
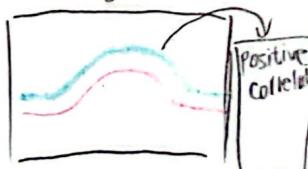
1) Getting the weather characteristic of cities



2) Showing the energy consumption of each city



3) Getting correlation between weather characteristic and Energy consumptions



Discussion

1) Weather characteristic of each city
- By comparing the cities' data of weather condition, get the weather characteristic of each city.

2) The correlation between each weather characteristic and energy consumption
- By comparing weather idiom and energy consumption idiom, see how a city's weather might correlate with its energy consumption.

Layout

Energy consumption of Australian Cities and correlation with weather

Text talking about the Water usage level of each city

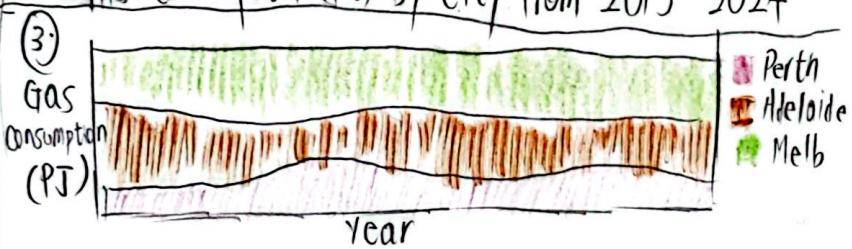


② Electricity Usage (PJ)

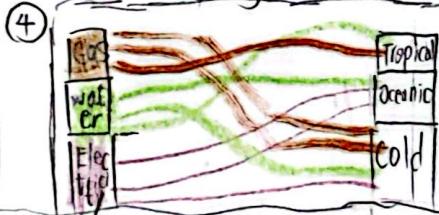


Text talking about the Electricity Usage level of each city.

GAS Consumption (PJ) By City From 2015 - 2024



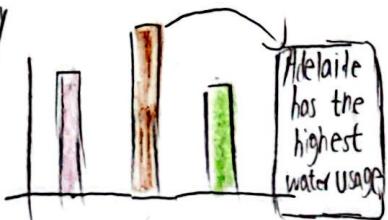
Text analysing the gas consumption of each city



Text talking about potential correlation between energy usage type and climate type found from the idiom.

Focus

1) Shows the energy consumption level of each city



2) Compare the energy consumption among cities



3) Finding any potential correlation between energy consumptions and climate types



Potential correlation between water usage and cold climate, as well electricity usage and cold climate

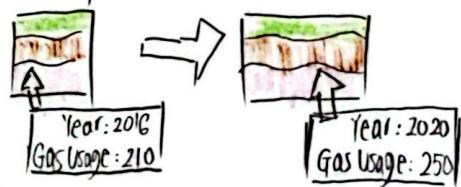
Author: IN YAN SIU Date: 14/10/24

Sheet: 4 Task: visualisation 2

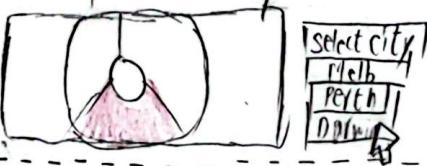
Operation

1) Tooltips for ③

Though kinda special, tooltips should still be added to ③, show different year data based on hovered area.

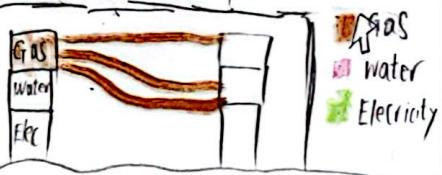


2) ② Dropdown for city filter



3) Filtering by clicking legend

④ So easier to perceive correlation



Discussion

1) The energy usage condition of cities

- By checking different energy usage data, see the usage condition of cities.

2) Comparison of cities' energy usage

- Also compare the energy usage of different city, therefore knowing the difference.

3) Energy Usage - Climate type correlation

- By seeing the energy consumption of different climate type, find any potential correlation.

Layout

Resource Usages

Author: InYan SIU Sheet: 5
Date: 7/10/2021 Task: visualization

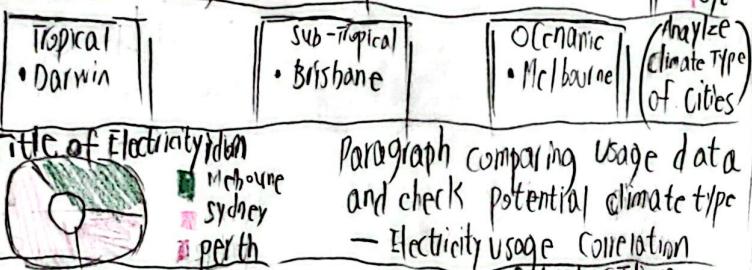
Weather Pattern Across Capital Cities And Potential Correlation With

Introduction Paragraph



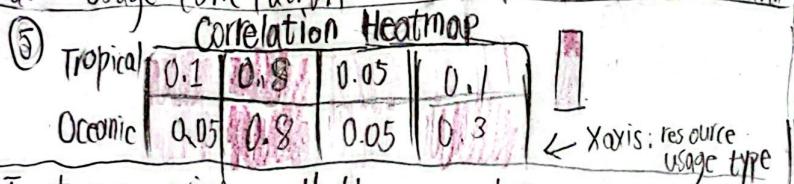
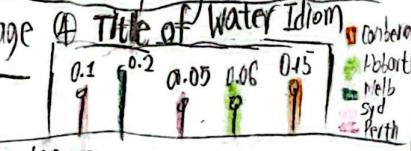
Paragraph analysing the Rain fall condition in cities

Paragraph analysing the temperature trend among cities.



Paragraph comparing usage data and check potential climate type - Electricity usage Correlation

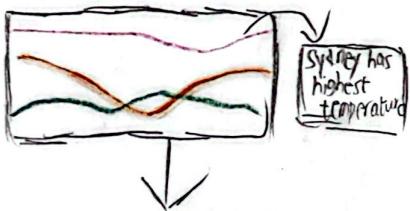
Paragraph comparing water usage and check potential climate type - Water Usage Correlation



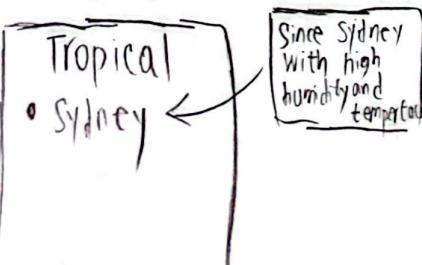
Text summarizing all the correlation

FOCUS

1) Identify the weather condition of cities



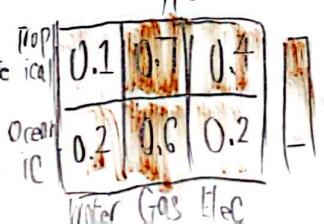
2) Identify the climate type of cities



3) Identify Resource usage condition of cities



4) Identify the Resource Usage - Climate type correlation



Operation

1) Dropdown List filtering climate type and resource usage (5)

Tropical	0.9
Oceanic	1.0

Water usage Electricity usage Gas usage

Climate Type [Tropical] (7)

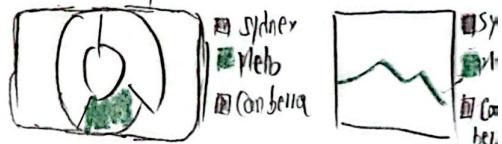
Resource Usage [Elec Usage] (7)

2) Showing value for (4)

On top of the point, Show value



3) Filter By Legend (3)(2)



DISCUSSION

1) The weather condition and climate type of each city

- By comparing the weather data, getting the weather characteristic of cities, and identify climate type.

2) Any potential resource usage - climate type correlation

- By Seeing the resource of each city, and their climate type, finds out any potential correlation.