

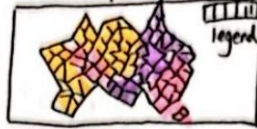
IDEA

Author: Yingyang Chen (33808635)
Date: 23/09/2025
Topic: FIT3179 Assignment 2

Choropleth map-visitors by state/territory



Bin Map

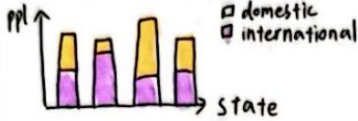


Histogram (Bar chart) - visitor spend



Stacked bars -

Domestic vs. International contribution



Timeseries (column or line)

- Monthly arrivals



Histogram (Bar chart) - spent nights

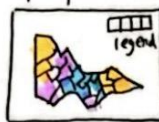


Small-multiples mini-maps

- Tourism regions inside one specific state



Queensland mini-maps



Victoria mini-maps

Pie chart (purpose of visit)

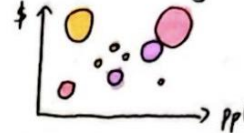


Donut chart



Scatter plot - spend vs. # visitors

Bubble size: night



Heat map - arrivals by month x states



FILTER

Filter out the bin map



Compared to choropleth map, we need more detailed data in building this map, making it more complex. And also it may be messy and hard to visualize if we do not make it carefully.

Filter out the bubble plot



The axis in the bubble plot does not make sense. It is a bit reluctant. The people visit and the money they spend do not necessary have any correlation or even relation.

COMBINE/REFINE

Pie chart → donut chart (more attractive)

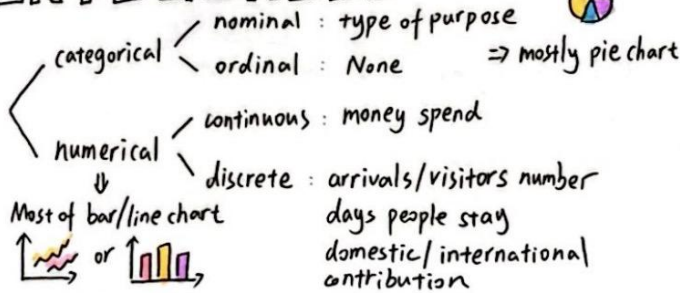


take some parts out to emphasize

Combine some diagrams into one extracted graph



CATEGORISE



QUESTION

-Do I encode some data with duplication?
(Some of them are. Heatmap and line chart both show the monthly arrivals but in two visual way. I should choose one of it instead two)

-Do all diagrams clearly show all the meanings?
Yes. But some uses same idioms. Such as Histogram, I might use more different idioms to show different data relationship.

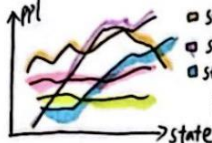
LAYOUT

TOURISM OF AUSTRALIA

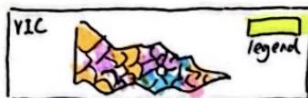


SubTitle
Background Story
Some information and introduction about the tourism industry in Australia

Analysis of trends of each state



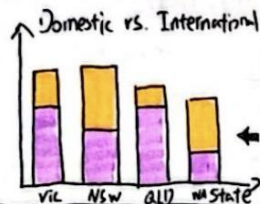
continuation of analysis of trends of each state



Focus on specific state
Here Victoria for example



Focus on specific state
Here for example Queensland



Texts

Texts



FOCUS

Choropleth Map (Main diagram of the whole viz)



Data should be probably normalized first to have a better view. We may also need a background ocean map to fill the blank, making it do not look so empty.

This is one of the most important diagram in the whole layout. Because it firstly shows the whole look of Australia and viewers can see the visitors distribution clearly in the first glance. And each state will be assigned with different colour illuminance to indicate the arrivals of that specific year.

Title: Visitors & Tourism of Australia

Author: Yingyang Chen

Date: 20/09/2025

Sheet: 2

Task: Assignment 2 FIT3179

OPERATION

Choropleth Map



this is the legend

It tells view what does the color value mean in each state.

Color in each state. Some different color values will be assigned to represent the number of arrivals in that region.

And if we use the indicator to hover on each state, it will show the meta data. Like the name of state (probably latitude and longitude), and of course the number of arrivals.

Potentially, it may have time bar to get to different year, if it's not too hard to make it work.

DISCUSSION

Pros: This first layout design basically includes all main stuffs needed, the whole Australia map and also the focused mini-maps. And also includes and line/bar charts to analyse the trends and rate, which is good.

Cons: the layout may be a bit overwhelming to viewers, they are a bit too close to each other. And probably the weight of each graph is too average, should zoom in the main part or use different typography to be more attractive.

LAYOUT

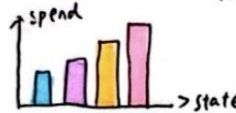
WHERE DO TOURIST

IN GO

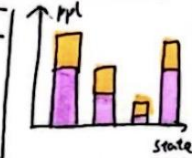
AUSTRALIA



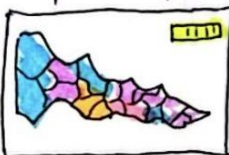
First half texts, analyse the choropleth map
Second half texts, analyse the line chart, show the trends



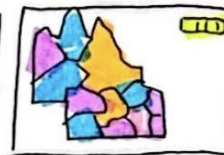
Title
Texts
Info
Background story



Multiple Mini-maps

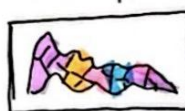


Text 1
← State 1
Text 2
State 2 →



FOCUS

Mini maps: (the specific part of the whole choropleth map)



In this case, data of each city should be also normalized. It's even more important because city number is larger and they are closer. May be hard to recognize.

These mini maps give a detailed view to viewers to have a more precise understanding of each small part in this state/territory. Similar as the country map, it will be also assigned with different color value to show the different arrivals. But this time, viewers can check a city instead just roughly the whole state.

Title: Tourism & Visitors in Australia

Author: Yingyang Chen

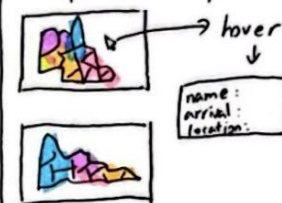
Date: 21/09/2025

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Task: Assignment 2 F13179

OPERATION

Multiple - Mini maps



These focused minimaps is the state of Australia. Above are QLD & VIC. but not necessary to be this two. Similarly, if we hover on it, then the details will be shown like state name, location, arrivals, and some other unique features.

DISCUSSION

Pros: In this second layout, it is more meaningful and we can see more diagrams on it. More info can be catched. Viewers have a more comprehensive and complete view of the tourists in Australia.

Cons: Too many graphs and less texts compared to graphs. We can remove some unimportant and unnecessary diagram and can even save more space for like subtitles and introduction or analysis for some vital graphs.

LAYOUT

THE MAP OF WANDERLUST: AUSTRALIA'S TRAVEL STORY



Text: Basic background information

SUBTITLE

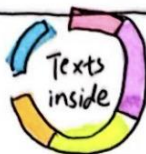


Analysis of VICTORIA

Analysis of New South Wales



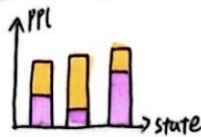
SUBTITLE



Analysis of both left & right graphs



FOCUS



This is the stacked bar chart, representing the contribution of domestic and international arrivals. X-axis is different States, Y-axis is number of arrivals.



This is also a bar chart. But this one is aiming to show how much money arrivals spent during their tour in each state.



The last potential bar chart has same x-axis but different Y-axis. It shows the days that the tourists/visitors stay meaning that State has more attractions or more funny if the visitor rather to stay longer.

Title: Tourism & visitors in Australia

Author: Yingyang Chen

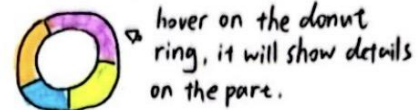
Date: 21/09/2025

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Task: Assignment 2 FIT3179

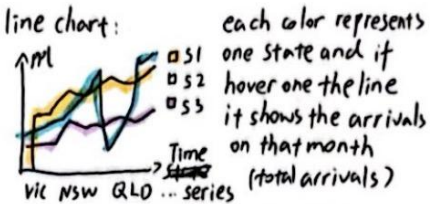
OPERATION

Donut chart:



each part represents one type of purpose of this travel, it will show the percentage and also the people of that part.

line chart:



DISCUSSION

Pros: Compared to last sheet, this layout is more formal because each part takes one row and subtitle is shown for each part, which is clean and clear for viewers to quickly get to each part.

Cons: May need be longer to show all the diagrams, every graph takes the same weight and space, may not be eye-catching or super attractive. Also, the main title is fun though, but there are too many letters, may be hard to read at a time.

LAYOUT

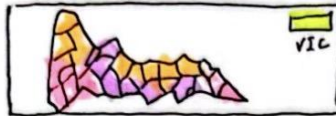
A VISITOR'S JOURNEY ACROSS AUSTRALIA

SUBTITLE



Background basic info & some brief analysis of the Australia choropleth map

SUBTITLE



TEXT

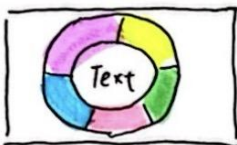
TEXT

SUBTITLE



Text to analyse the trends of the line chart

SUBTITLE



Text for left graphs
←
Text for right graph
→



FOCUS

The most important issue need to be noticed is about the balance of diagrams and texts. If the diagrams are too many, then viewers may feel like they cannot understand fully about the visualization. But if the text part dominates, viewers may feel overwhelming about tons of words.

So I think both of the should take some weight, or diagram with slightly higher weight.

layout can be:

D	D
Sub	
Text	

 $\frac{1}{2}$ $\frac{1}{2}$ or

D	T	D
D	D	
T		

 $\frac{1}{3}$ $\frac{1}{3}$ $\frac{1}{3}$ etc.

Title: Tourism & visitors in Australia

Author: Yingyang Chen

Date: 22/09/2025

Sheet: 5

Task: Assignment 2 FIT 3179

OPERATION

Conclusion:

- choropleth map:

All maps including the country & state maps will focus on one year arrivals. And the number of arrivals will be assign with different colors.

- line chart:

The line chart is aiming to show the arrivals in each month, more precisely than just showing the whole year.

- stacked bar chart:

The bar chart mainly shows the contribution of different type of visitors, giving viewers different aspects to catch the viz.

DETAILS

-Dependency: VS Code, Pure CSS,

VegaLite, ABS, TRA
↓
get data

- Estimated Time:

For this five-design sheet, I should spend two - three days time on it and some other days for approval and suggestion.

For searching and clean data, it may be another extra day. Then I will create all the diagrams I need, two days should be enough. Then finally integrate the text with all pics and diagram and finalise three days is a decent time.

- specific feature: the website size should be in the whole screen