

Data Visualization 2

Sheet 1 - Brainstorm

date - 10.10.2025

Potential Domains

Weather + Agriculture

Tourism

Education outcomes

Transportation Patterns

Urban development

Economic Recovery

Evaluation Criteria

Data Availability

Story potential

Visualization Opportunities

Relevance

Chosen Topic

Australia's Regional Tourism Renaissance

Potential Data Sources

Tourism Research Australia

→ Domestic Tourism statistics

Australian Bureau of Statistics

(ABS) → Retail Trade Data.

Geographic Data.

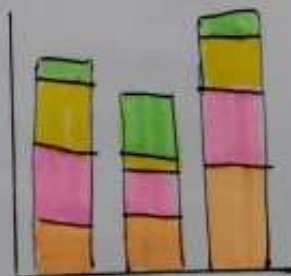
→ Github Australian States GeoJson.

Data Quality → official, government resources.

Potential Idioms



Geographic regions colour map.



stacked bar chart



pie chart



line chart

Key Data Dimensions

State (NSW, VIC, QLD, WA, SA...)

Year (2019-2023)

Day Trip (Thousands)

Spending

Growth (calculated)

Base 2019 = 100%

Hover tooltips.

Legend interaction

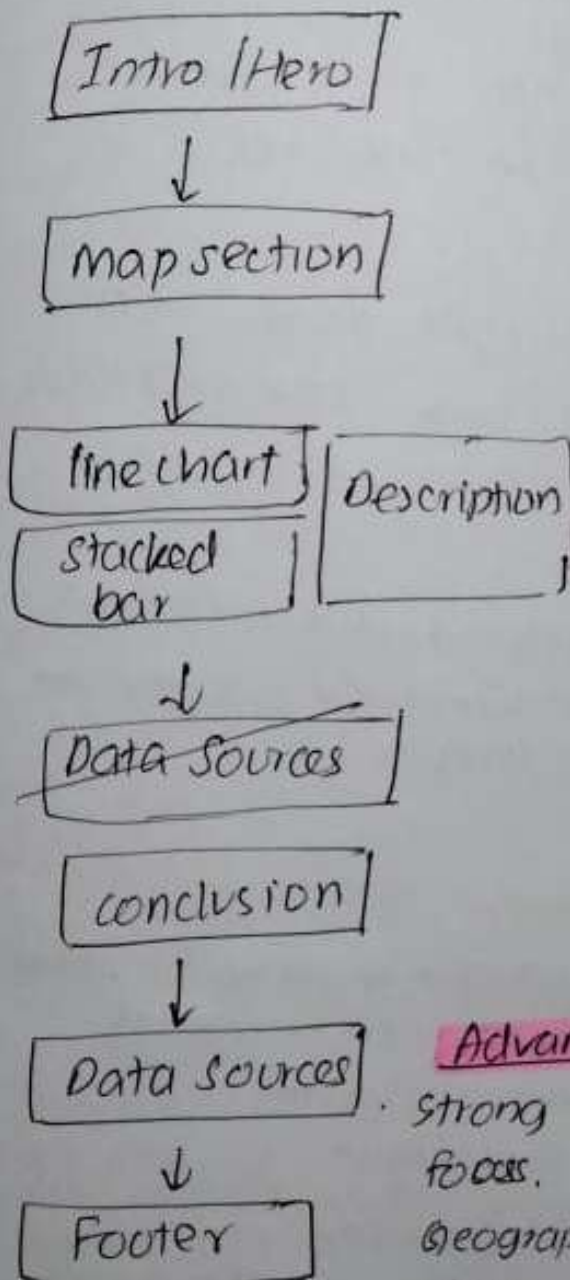
Linked highlighting

Data Visualization 2

Sheet 2. ~~8.11.11~~ - Initial Design

Date - 10.10.2025

Layout



Map - Chloropleth
Geographic Distribution of
Tourism

Multi line chart
Domestic Daytrip tourism
trends (2019 - 2025)

Stacked Bar chart
State-by-State Tourism
Comparison by year.

Line chart or slope chart.

Covid 19 recovery patterns
(2019 - 2025)

Advantages

- Strong narrative focus.
- Geographic context clear
- Good intro to the data story

Disadvantages

- Abstract scales of charts
- Space efficiency
- Inconsistency
- User Expertise
- Assumption

Data Visualization 2 Sheet 3

Title - Australia's Regional
Tourism renaissance



operation

Hover and show exact values
Zoom / Pan on time axes.

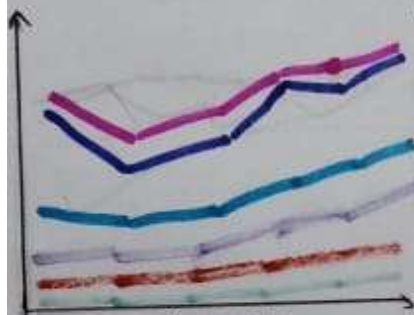
Advantages

Clearly highlight trends and
recovery for each state overtime

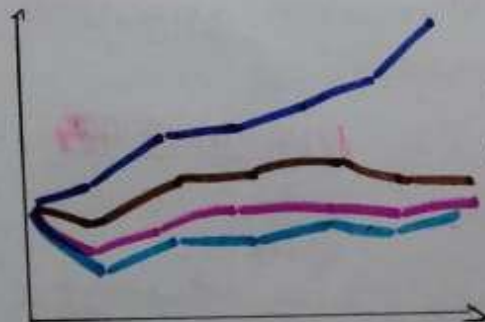
Highlights NT's rapid growth

Disadvantages

All lines clustered. difficult to see
Requires interaction for clarity on
individual lines



Domestic Daytrip
Tourism Trends



COVID 19 Recovery Patterns
Base 2019 = 100%

Discussion

- Clearly shows Recovery Trajectories
- Highlights NT's exceptional recovery growth
- Easy comparison
- Doesn't show raw visit values directly
- Potential for line overlap in clustered periods

Data Visualization 2

Sheet 4- Initial Design

Title - Australia's Regional Tourism Renaissance

Operations

Hover for exact values

Percentage per state, year

Click on the state in legend to highlight / filter bars / years

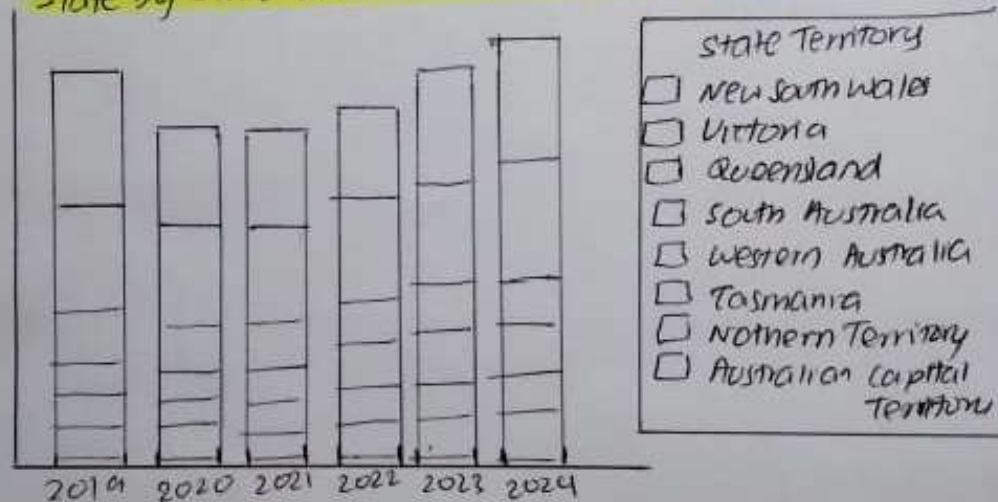
Zoom / Pan → not applicable

Toggle to view as normalized / percentage values

- Layout

- Intro
- map
- Trends (Line)
- Recovery (Line)
- ~~Recovery~~
- Key Takeaways

State by state Tourism comparison by year



Discussion - Advantages / Disadvantages

- clear part to whole relationship
 - simple design
 - Easy to see each states contribution
 - can see the trend as a whole
 - Good for tracking composition shifts visually
- minors shares can be difficult to see
less effective for compact roles directly

Data Visualization 2

Sheet 5

Realization Design

17th October 2025

Discussion → Detail

Interactive Choropleth map

GeoJson Data for Geographical locations.

Line charts with filters.

multiple lines for states

color coded for states

legend on right side

Algorithms / Libraries / methods

Vega-Lite → visualizations

Data loading

Map projection

Time (Developer Hours)

Data Prep - 10 hours

&
Research

map setup - 10 hours

Line chart - 5 hours

stacked bar - 5 hours

Documentation - 3 hours

Deployment / - 5 hours

Testing

FINAL PLAN

FINAL LAYOUT

Dependencies & Requirements

HTML / CSS

code editor - vs code

web server (Github pages)

Json / csv file loader -

Title
Description

map

Description

line chart
trends

Description

stacked bar
chart

description

line chart
growth

Discussion /
Conclusion

Data sources

Footer -