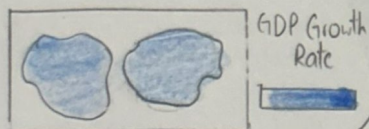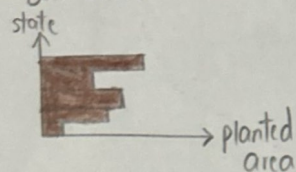# IDEAS

MALAYSIA AGRICULTURAL PRODUCTION AND ECONOMIC PERFORMANCE

1. GDP Growth by State
→ Choropleth Map
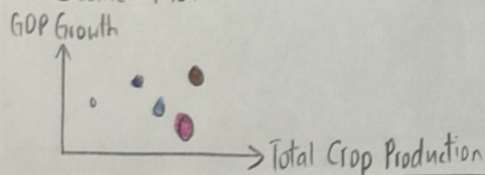

GDP Growth Rate

2. Compare multiple crops by state
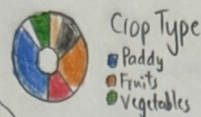→ Bar chart
state
→ planted area

3. Production Vs GDP
→ Scatter Plot
GDP Growth
→ Total Crop Production

4. Crop Composition
→ Donut Chart
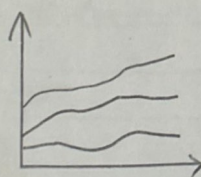Crop Type
- Paddy
- Fruits
- Vegetables

5. Crop Trend Over Time
→ Stacked Area

6. Crop Production Trend
→ Multi-line Chart

FILTER

Main:

(1) Choropleth Map

(2) Bar Chart

(3) Scatter plot

(4) Donut chart

CATEGORIZE

1. Geographic Visualisation
   Purpose: Show spatial patterns
   → Choropleth Map

2. Comparison
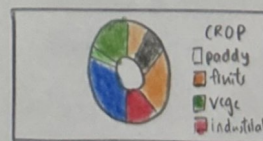   Purpose: Compare across categories
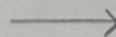   → Bar Chart
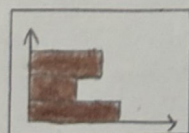
3. Relationship and Composition
   → Scatter Plot
   → Donut Chart

COMBINE AND REFINE

Multi-layered Analysis

 → → →

CROP
- paddy
- fruits
- vege
- industrial
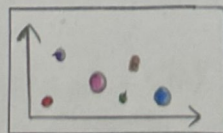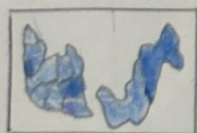
QUESTIONS

1. How does agriculture relate to economy

2. Which state produce more crops?
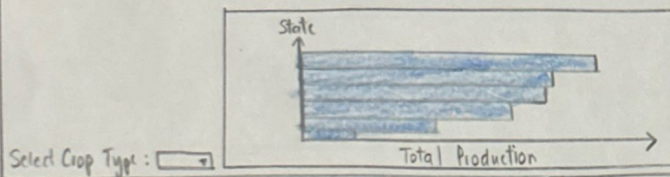
3. What crops does each state specialize in?

LAYOUT

How Malaysia's Agricultural Heartland Fuels the Nation's Economy
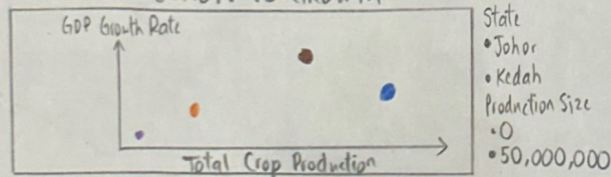
Introduction Text

ECONOMIC PERFORMANCE

GDP Rate (%)

CROP SPECIALIZATION

State

Select Crop Type : [▾]

Total Production

PRODUCTION VS GROWTH

GDP Growth Rate

Total Crop Production

State
• Johor
• Kedah
Production Size
• 0
• 50,000,000

NATIONAL CROP

6.9%

Crop Type
▪ Paddy
▪ Fruits
▪ Vegetables

FOCUS

GDP Growth Rate (%)

-5   0   5

State : Johor
GDP Growth : 1.9

OPERATION

• Hover tooltips: Display the state name and the GDP growth rate (%), the crop type, the planted area, and the production value.

• Crop Type Selector: Click on the crop type to show only the planted area for that specific crop across all Malaysia state

• Year Selector: Click on the year to show how Malaysia's crop composition has changed over time
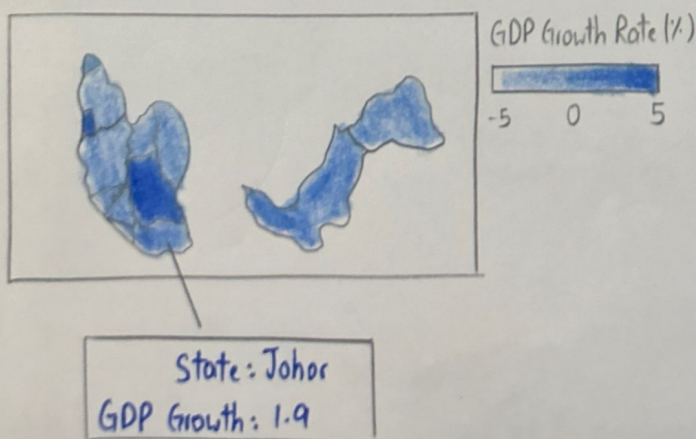
DISCUSSION

Pros:
→ Provides a comprehensive overview
→ Clear narrative flow
→ Mobile friendly

Cons:
→ Limited exploration

LAYOUT

How Malaysia's Agriculture Heartland Fuels the Nation's Economy

Economic Performance

Production VS Growth

GDP Growth Rate (%)

y-axis: 5, 4, 3, 2, 1, 0, -1, -2, -3, -4, -5

x-axis: 0, 20M, 40M, 60M, 80M, 100M
Total Crop Production

Agricultural Specialization by State

State

Kedah
Sarawak
Perak
Kelantan
Perlis
Sabah
Selangor
Pulau Pinang
Terengganu
Pahang
Melaka
Johor
Negeri Sembilan

Total Production (tonnes)

Natural Crop Composition

6.9M

Crop Type
☐ paddy
☐ fruit
☐ vegetables

Select Year: [▼]

FOCUS

State

Kedah
Kelantan
Perak
Selangor
Sabah
Terengganu
Pahang
Johor

State : Selangor
Crop Type : Paddy
Planted Area : 35,539
Production : 153,492

x-axis: 0, 40000, 60000, 80000, 100000, 120000, 140000, 160000, 180000
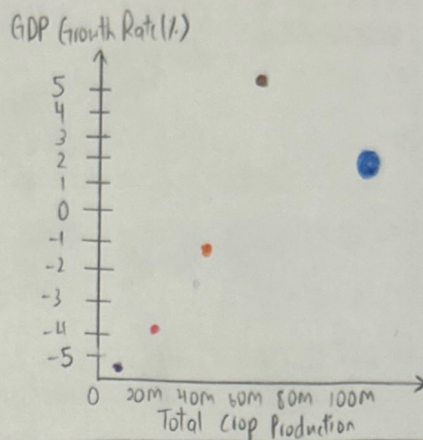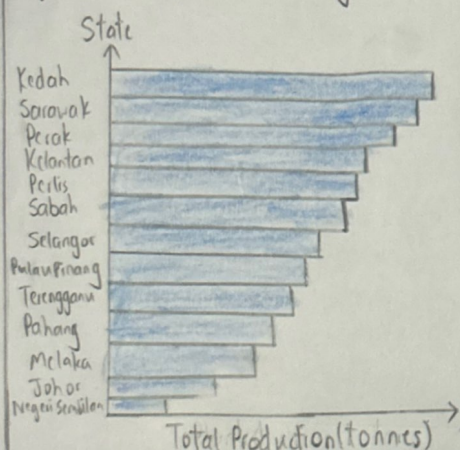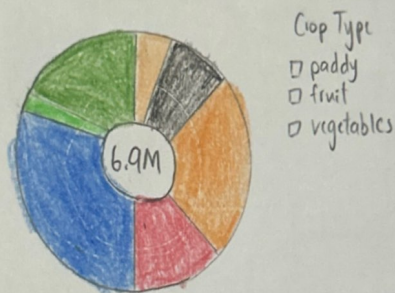Total Production
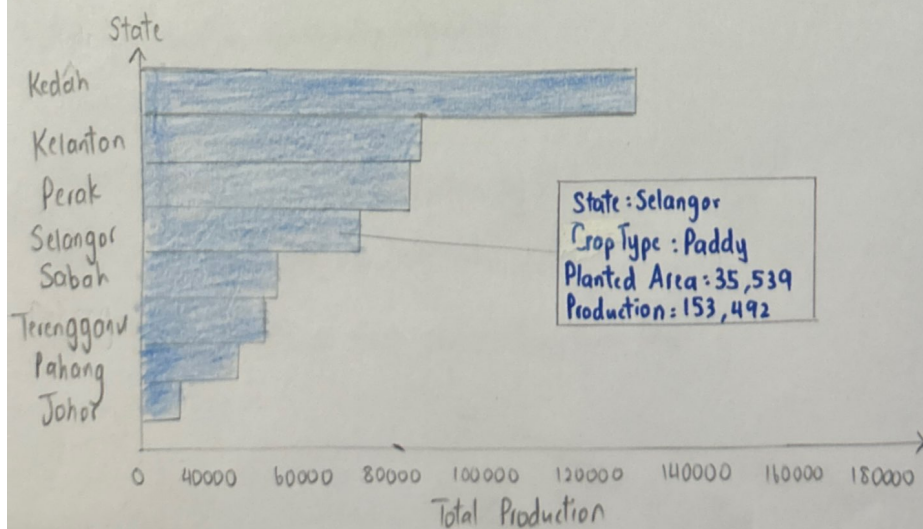
Select Crop Type: [◇] → Click on the crop type to choose specific crop type

---

OPERATION

- Hover tooltips: Display the state name, and the GDP Growth Rate (%), the crop type, the planted area, and the production value.

- Crop Type Selector: Click on the crop type to show only the planted area for that specific crop across all Malaysia state

- Year Selector: Click on the year to show how Malaysia's crop composition has changed over time

DISCUSSION

Pros:
- All information visible at once
- Good for exploration

Cons:
- May feel cluttered on small screens
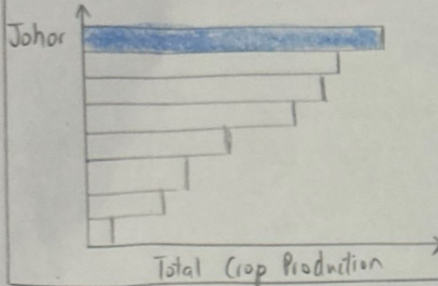- Reduced size for each chart may lose detail

LAYOUT

How Malaysia's Agricultural Heartland Fuels the Nation's Economy
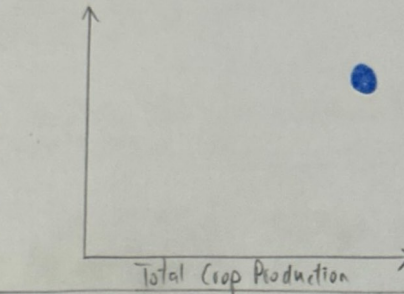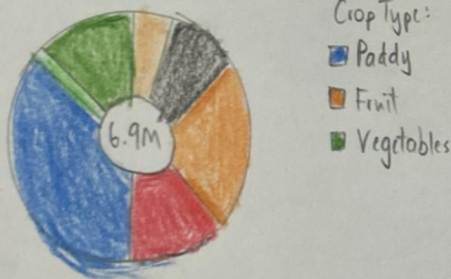
Economic Performance

GDP Growth Rate (%)

Selected State : [Johor ▽]

Agricultural Specialization by state

State

Johor

Total Crop Production

Production VS Growth
GDP Growth Rate

Total Crop Production

Natural Crop Composition

6.9M

Crop Type:
- Paddy
- Fruit
- Vegetables

Select Year : [▽]

FOCUS

6.9M

Crop type
- Paddy
- Fruits
- Vegetables
- Industrial Crop
- cash-crops

Crop Type: Paddy
Total Production: 2281739
Percentage: 33.1

Select Year: [▼] ———— Click on the year to choose specific year

OPERATION

- Hover tooltips : Display the state name and the GDP growth rate (%), the crop type, the planted area, and the production value

- Crop Type Selector : Click on the crop type to show only the planted area for that specific crop across all Malaysia state

- Year Selector : Click on the year to show how Malaysia's crop composition has changed over time.

DETAIL

Pros :
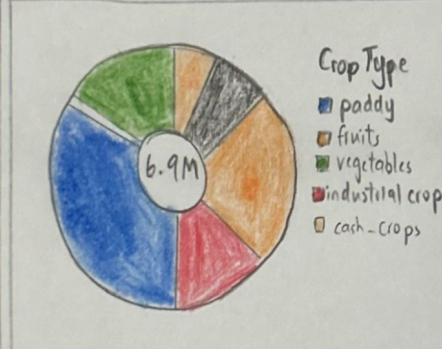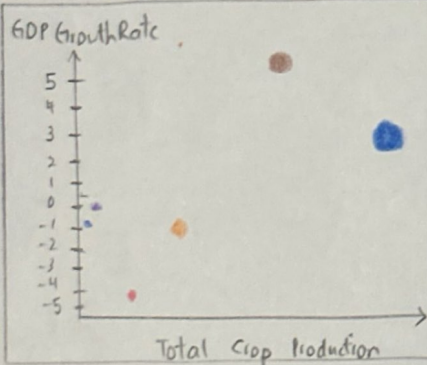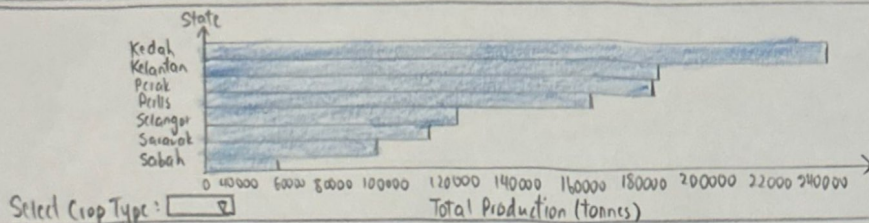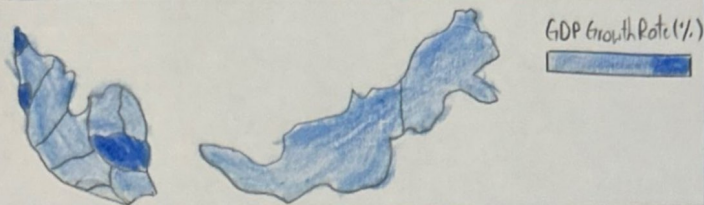- Clear information hierarchy

Cons :
- Potential information overload
- Fixed layout constraint
- Limited space for annotations

LAYOUT

How Malaysia's Agricultural Heartland Fuels the Nation's Economy

Introduction Text

GDP Growth Rate (%)

State

Kedah
Kelantan
Perak
Perlis
Selangor
Sarawak
Sabah

0 40000 60000 80000 100000 120000 140000 160000 180000 200000 220000 240000

Total Production (tonnes)

Select Crop Type: [▼]

GDP GrowthRate

5
4
3
2
1
0
-1
-2
-3
-4
-5

Total Crop Production

Crop Type

6.9M

- paddy
- fruits
- vegetables
- industrial crop
- cash-crops

Data Source: Link + Text

Source 1
Source 2

Created by: Winnie Ng

OPERATION

- Hover tooltips: Display the state name and the GDP growth rate (%), the crop type, the planted area, and the production value.

- Crop Type Selector: Click on the crop type to show only the planted area for that specific crop across all Malaysia state

- Year Selector: Click on the year to show how Malaysia's crop composition has changed over time.

FOCUS

- All visualisation are equally important

- Choropleth Map: GDP Growth with annotations

- Interactive Bar Chart: Crop Production by State

- Scatter plot: Production vs GDP relationship

- Donut Chart: National Crop composition over time

DETAIL

- Use Vega-Lite for all charts

- Time to build / implementation 3 weeks

- Require TopoJSON file of Malaysian states.