**URL to my visualisation**

<https://junistz-dev.github.io/2024_Data_Vis_Project2/submit.html>

**URL to 5DS**

**Domain:** Malaysia water resource management

**Why:** To analyze the patterns of water usage and consumption in Malaysia, providing insights for improving resource management and promoting sustainable water resource practices.

**Who:** Targeting environmental management agencies, government bodies, researchers, and the general public, all stakeholders interested in water resource management.

**IDIOMS: What, Why and How**

**1. Choropleth Map for water consumption for domestic/non-domestic purpose**

* **What:** this visualization shows the water consumption, which purposes.
* **Dataset Type:** Map
* **Data Attributes:** value, year (quantitative) | state, sector (qualitative)
* **Why:** To visualize the regional differences(state) in water consumption.
* **How:** create a Choropleth Map that distinguishes each state by color to represent differences in water consumption.
* **Channel:** Color hue, yellow-green-blue

**2.  Water Production in Malaysia**

* **What:**this visualization shows the water production of Malaysia 2000~2022
* **Dataset Type:**Table
* **Data Attributes:** Water production (millions liters per day), year (Quantitative)
* **Why:**To observe the overall trend of water production in Malaysia.
* **How:**Line graph ( added brushing interaction) are used to represent the trend of water production in Malaysia throughout the 22 years.
* **Channel:** x-axis - Year, y-axis - Water production

**3. Water production by State in Malaysia**

* **What:** it whos the water production of malaysia, by state (2000~2022)
* **Dataset Type:** Table
* **Data Attributes:** Water production (millions liters per day), year (Quantitative) | states (Qualitative)
* **Why:**  To gain a more detailed understanding of which states are experiencing specific increases.
* **How:** Line graph by states with year, productions slider.
* **Channel:** Color hue for each state | x-axis : year , y-axis : water production

**4. Relationship between water access and water production**

* **What:**  Scatter plot
* **Dataset Type:** Table
* **Data Attributes:** Access, water production, population, year (Quantitative) | State (Qualitative)
* **Why:** Analyze and find the correlationship between water access and production with population.
* **How:** scatter plot with state as different color, different size depends on population.
* **Channel:** Color hue for different states(the circle), light grey color for text annotation.

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* **Layout:** The key graphs on water consumption by state are positioned at the top, featuring a Choropleth map. Detailed graphs follow below, progressively delving deeper into water production in Malaysia and by state. This structure allows for a more granular exploration of the topics as one scrolls down.
* **Colour:** Given the water-related theme, I aimed to utilize a predominantly blue color palette. The color intensity increases with higher water usage, transitioning to darker shades of blue. For water production, a combination of blue and light blue shades is employed, with distinct colors assigned to each state to enhance differentiation.
* **Figure-ground:** The design features a white background with black text, incorporating some bold text in different colors to highlight key points, such as the increase in water production, represented in navy and orange text.
* **Typography:** The main title at the top is presented in bold Arial font to ensure prominence, while the subtitles are rendered in a thin sans-serif typeface for clear differentiation. Each graph title uses a serif font to maintain visual consistency. The body text of the graph descriptions is in sans-serif, creating uniformity with the paragraph text. Important sections are emphasized with bold formatting or different colors for enhanced readability.
* **Storytelling:** Magazine with annotations and animations for context**.**