1. **Domain**

Deforestation in Malaysia

The visualization will focus on the deforestation trends in Malaysia, analysing the forest loss data. This encompasses an examination of the geographic distribution of deforestation, the rate at which it has occurred over recent years, and the primary causes behind these trends. Key areas of interest include logging activities, agricultural expansion, and urban development pressures. The impact on biodiversity, climate change, and indigenous communities will also be highlighted to provide a comprehensive view of the situation.

**2. Why?**

This visualization aims to raise awareness and understanding of deforestation in Malaysia, highlighting the urgent need for conservation efforts. It will serve as a tool for educators, policymakers, environmentalists, and the general public to grasp the scale of deforestation and mobilize action towards sustainable land management practices. By making the data accessible and visually engaging, the project hopes to encourage informed decision-making and promote environmental stewardship.

**3. Datasets**

The primary dataset for this project will be sourced from Global Forest Watch, specifically tailored to Malaysia’s forest change data. The dataset includes:

* Yearly deforestation rates from 2000 to 2023
* Geographic coordinates of deforestation hotspots
* Causal factors for deforestation events

**Dataset link:** [Global Forest Watch - Malaysia Dashboard](https://www.globalforestwatch.org/dashboards/country/MYS/?category=forest-change&location=WyJjb3VudHJ5IiwiTVlTIl0%3D)

**4. Design Ideas**

* **Choropleth Map (Map Idiom)**
  + Display deforestation rates across different regions of Malaysia, using a colour luminance to signify the intensity of forest loss.
  + Inspired by: Climate change maps showing temperature rise, which effectively communicate regional variations and trends over time.
* **Stacked Area Chart**
  + Illustrate the cumulative effect of deforestation over the years, with layers representing different causes such as logging, agriculture, and urban development.
  + Inspired by: Economic growth charts, which help viewers understand component contributions over time.
* **Dot Distribution Map**
  + Show specific locations of significant deforestation events, with dot sizes representing the area size affected.
  + Inspired by: Population density maps, which utilize dot sizes to indicate density across regions.
* **Sankey Diagram**
  + Visualize the flow from causes of deforestation to impacted areas, highlighting the proportionate impact on biodiversity, carbon emissions, and land use changes.
  + Inspired by: Energy flow charts, which detail the transfer and transformation of energy from sources to outputs.
* **Bubble Chart**
  + Compare regions based on the rate of deforestation, causes, and impacts, with bubbles sized by the area deforested and coloured by the main cause.
  + Inspired by: Financial investment portfolios, which use bubble size and colour to represent different dimensions of data.

By utilizing these idioms, the visualization project will provide a multifaceted view of deforestation in Malaysia, making complex data accessible and actionable for a diverse audience.