Data Visualization and Storytelling

a)   Visualization Goals and Storyline Construction

This project aims to provide insights for stakeholders to make data-driven decision-making related to tourism. To ensure that the aim of this project is reached, the following objectives are formulated:

1. To identify trends and patterns in international arrivals
2. To develop an interactive dashboard to visualize findings
3. To provide actionable recommendations for the stakeholders for strategic planning

Primary stakeholders that would greatly benefit from this project includes Malaysia's government agencies under Ministry of Tourism, Arts, and Culture (MOTAC) and Ministry of Transport (MOT) since they rely on insights to improve tourism promotion strategies and optimize infrastructure and facility with tourist demands. On the other hand, local businesses in the tourism and hospitality industries are also indirectly benefited from this project findings to improve products and services offerings that suits targeted tourist.

b)   Visualization Techniques and AI Insights

<u>Visualization Techniques</u>

Among the chart that have been used in this project are:

1) Line Chart to display the trend of total arrivals by month across different years (2020-2024), highlighting seasonal peaks (e.g., December) and significant growth.
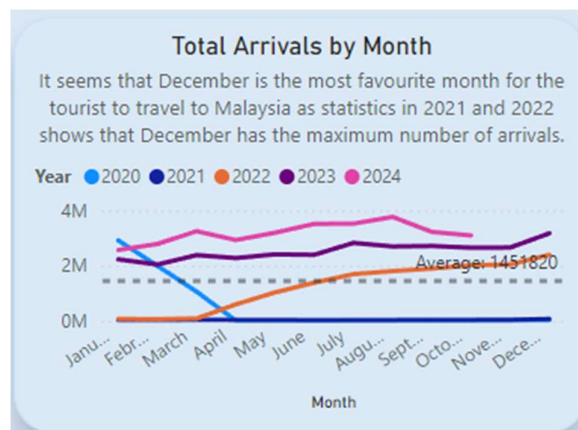
2) Pie Chart to illustrate the distribution of total arrivals by continent, emphasizing the dominance of Asian tourist to Malaysia.

3) Bar Chart to shows the total arrivals by state of entry, comparing states like Johor and Terengganu, with clear differences in total arrivals.
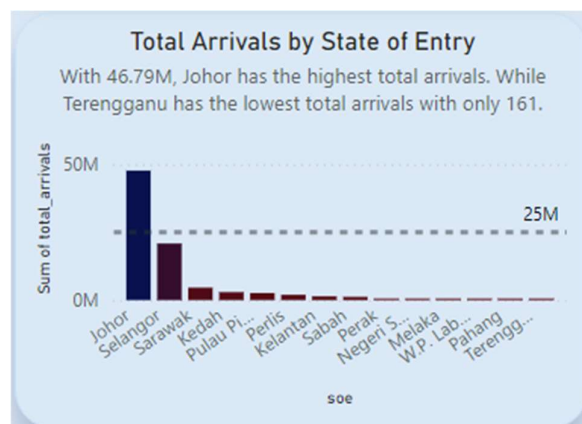
4) Maps to visually emphasizing regions with higher tourist arrivals where darker shades of blue indicate higher numbers of total arrivals.
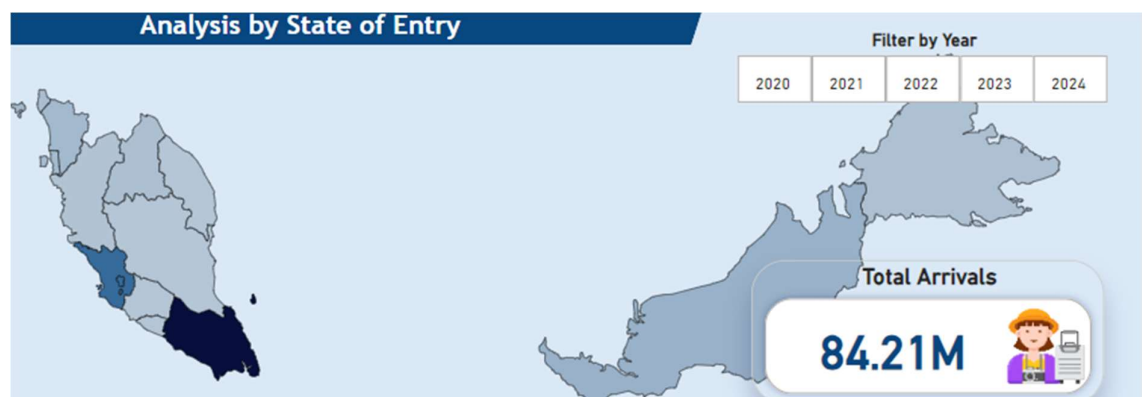
AI Insights:

Using the Narrative functions in Power BI, it gives insights to guide me in summarizing the key takeaways and patterns from the data such as:

1) Highlighted significant trends, such as the 425% increase in arrivals from 2020 to 2024.

2) Provided comparisons between state of entry where Johor accounting for 56.68% of arrivals and being 17.5M higher than Terengganu.
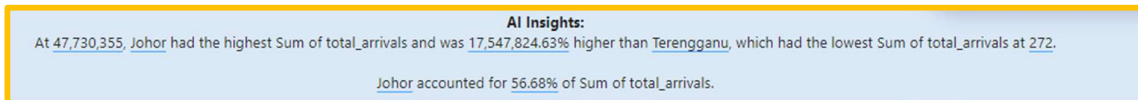
How AI Enhances Storytelling:

AI enhances the storytelling in this dashboard by identifying the growth patterns and emphasizing the significant differences to help users understand the shifts over time and enables data-driven planning for marketing and resource allocation.

c) **Customization and Interactivity**

Among the interactive features that are used in this dashboard are filters to drill down by year, month, country, continent, and state of entry to customize the analysis into specific areas of interest.

These interactive features allow deeper exploration of data by making it easier for the users to connect with the data and uncovers hidden patterns. With the help of filters, users can test various 'what-if' scenarios by specifying their preferences of analysis.

MALAYSIA TOURIST ARRIVAL STATISTICS

Summary

Filter Here!

Year
All

Month
All

Country
All

Continent
All

State of En...
All

Total Arrivals by Year
Total Arrivals sees a significant spike starting from 2021, resulting in a 425.04% increase between 2020 and 2024. The steepest incline in 2020 is due to Covid 19.

40M
20M
0M
2020   2021   2022   2023   2024
Year

Total Arrivals by Month
It seems that December is the most favourite month for the tourist to travel to Malaysia as statistics in 2021 and 2022 shows that December has the maximum number of arrivals.

Year ● 2020 ● 2021 ● 2022 ● 2023 ● 2024

4M
2M
0M
Janu... Febr... March April May June July Augu... Sept... Octo... Nove... Dece...
Month

Average: 1451820

Total Arrivals by Continents
93% of the travellers are from Asia continent. It is due to Malaysia is also in Asia so it is cheaper and save time to travel to neighborhood country.

continent

Total Arrivals by State of Entry
With 46.79M, Johor has the highest total arrivals. While Terengganu has the lowest total arrivals with only 161.

50M

Analysis by State of Entry

Filter by State of Entry

Johor	Kedah	Kelantan	Melaka
Negeri Sembil...	Pahang	Perak	Perlis
Pulau Pinang	Sabah	Sarawak	Selangor
Terengganu	W.P. Labuan		

Filter by Year

2020	2021	2022	2023	2024

Total Arrivals

84.21M