Data Visualisation Assignment 2

Aditya Singh, Venkatesh Thapan, Divij Singh
Professor Venkatesh Rajamanickam
Link to the project : https://thenerdyouknow.github.io/mapbox-scrollytelling-starter/

We were assigned the data set consisting of the 10 busiest airports in India, their human traffic for the Financial Years 2015-2016, and 2016-2017, and the according ranks.

First we looked at presenting a fictional story about a character named Bob, (may he rest in peace) and his journey through the list. However, this did not make use of the data given, and we were unable to see how to present the data in an organic manner.

We then searched for other data for the airports on Flightradar24, and tried to look for correlation between the given data and what was available on the website. However, unable to find any meaningful data, we decided to return to our roots.

Following the source on Github, we also took the data of their corresponding cargo tonnage for FY 2016-2017.

Taking the square root of the traffic for FY 2016-2017, and cargo tonnage for FY 2016-2017, we composed a rounded-off ratio of traffic to cargo for each given airport which we called the root indicative ratio. The population traffic represents the number of people going in and out of that city because of various reasons, but mainly tourism, business or education and the cargo traffic would generally represent the raw materials for business industries being imported and exported. The ratio between these two quantities provided us with an interesting quantity to measure and compare the nature of the top metropolitan cities in India.The reason for taking the square roots is to make the calculations easier, while preserving the original ratios.

From the ratio, we understood that the airports with a higher ratio were more focused towards human traffic, whereas those with a lower ratio were aimed towards trade.

The prime example for this is Goa, with a ratio of 41, which is a well known tourist destination, with a low industrial capacity, with the next highest ratio being Pune's 13. Active Port cities like Kolkata and Kochi had lesser cargo traffic through airport because of cheap cargo transport available via water.

Mumbai and Delhi, the top two airports in both foot traffic and cargo tonnage, both fall below 9, which is taken as a baseline for looking at outliers (as foot traffic cannot be equal to cargo tonnage).

The story presentation examines the reasoning behind some of the outliers and in general the main factors which dominate the control over the population traffic and cargo traffic at airports. We used a map for the visualisation to locate the cities we are showing insight on, the cities were represented by a dot whose size was based on the relative ratio of the root indicative ratio. We made a story in descending order of the population traffic at the airport, mainly because Bombay and Delhi were at the top, and we were using those in drawing comparisons with other cities so they had to be shown first and also because it resulted in a clean order from top to bottom barring a few exceptions. The map was made interactive with the zoom feature to make the dots more visible and made sure they do not overlap.