Geo-visualisation of the Top 10 Peaks in India

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1. Introduction

1.1 Intro

This paper will illustrate the process of creating a geo-visualisation of the top 10 peaks in India by height. It will touch upon our approach to creating this visualisation and the tools, technologies and design philosophies we used and learnt while creating this geo-visualisations.

2. Cartography

2.1 Data Collection

We have chosen a basic satellite map design to visually represent the essence of trekking and give our map a realistic feel. Through the course of this assignment, we learnt that we should not include details that do not add any value to our project and hence, we have removed any micro details such as roadways, built features (rail stations, urban parks, famous landmarks etc.), villages etc. Our aim through this map projection is to display the bigger picture of where the peak is located and how it actually looks in real time. The geo-visualisation is also meant to give a rough idea of the terrain that potential trekkers would traverse. Although the map is not the best visual representation in terms of undertaking a trek in reality, it however, provides more knowledge of the peak in terms of geography when as compared to the 2D images of the peak. For example, our visualisation of the peak K2, shows how difficult and arduous the trek can be due to the snow cover and topography of the immediate landscape.

3. Visualisation Design

3.1 Dataset Transformation

The dataset was that of the highest peaks in India by state, and hence we had 30 peaks for the 30 different states of India. We decided to truncate the dataset to cater to only the top 10 highest peaks in India to accommodate our story.

3.2 Color Encoding

The 10 were again divided into three categories, wherein the top 3 highest peaks (above 7,800 m) were coloured red, the following 4 (above 3,700 m) on the list were coloured yellow and the final 3 (above 2,650 m) peaks were coloured green.

3.3 Visual Encoding

The 10 were again divided into three categories, wherein the top 3 highest peaks were coloured red, the following 4 on the list were coloured yellow and the final 3 peaks were coloured green.

4. Interaction Design

4.1 Characters

We introduced a character, named Uncle Joko, who claims to be a compulsive trekker and he takes us through the story of the top 10 peaks in India that every trekker - be it a pro or an amateur, should try to scale. This has been done to captivate the audience into listening to the story from an

external character rather than just reading just another boring article in first person.

4.2 Design Philosophy

Other than that, we included a picture of each peak as it pops up on the map similar to the terrain so that the audience gets a sideways view of the peak rather than an eagle's eye view of the map on the left hand of the screen.

5. Story

5.1 Flow of content

The first thing that we noticed while discussing our data-set was our keen interest in trekking and mountaineering. But even though we go for treks at least once every year, there was no reason for us to know about these peaks as no importance has been put on educating the layman about them in general. The data-set provided to us was restrictive in terms of using our creativity. Therefore, our main challenge lay in correlating the heights to the mountain peaks and adding a story to it. Our initial plan was to build a travelling itinerary with costing and number of days for our amateur trekker. Unfortunately, due to lack of information about the lesser known peaks, we decided to go for something simpler that would be of value to our end user.

An assumption that can be made is that even though the height of a peak is directly proportional to the difficulty level, the most expeditions were undertaken to reach the summits of the tallest peaks. This implies that people love trekking difficult peaks. The wide range of the peaks in our dataset makes it easier to cater to any kind of trekker where the common attributes of a hill can be its popularity and difficulty. No one chooses the easy task. Many trekkers often like to choose the least popular ones to be able to 'explore' the terrain in its true essence. Hence, the peaks mostly in the second half of our project are lesser known with minimal adventures recorded on them.

6. Acknowledgments

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7. Links

Check out the repository for this geo-visualisation at https://github.com/koishore/mapbox-scrollytelling-starter

Check out a live demo of the geo-visualisation at https://koishore.github.io/dataviz/assgn2/