**World Happiness Report- An Overview**

**A Project By:**

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**Project Outline**

Using the “World Happiness Report” dataset, we will be analysing the relationship between the perceived happiness of a country’s citizens, the country’s GDP, and the average life expectancy.

* The dataset is in five separates .csv files, which we will clean using pandas to drop irrelevant columns and rename in preparation for a database merge.
* We will then create SQLite database and create a table to hold the data, which we will query using our Python Flask API.
* The plots that we will use to represent the data are “Choropleth Polygon Map”, “Bubble Plot”, “Bar Charts”.
* The Choropleth map will use a separate dataset, which will be the average of all five years data.
* The plots will be changed using the selector to change the regions.
* The dataset will be changed by selecting the years from the dropdown selector, which will update all plots with the new data except the map.
* We will be using the JavaScript Library **“FusionCharts”** for our 3D bar chart to meet the requirement to use an unknown library for the project

**Overview of the Visualization**

**Choropleth Polygon Map**

* The Choropleth map will use a separate dataset, which will be the average of all five years data
* The plots will be changed using the selector to change the year
* The dataset will be changed by selecting the XXX from the dropdown selector, which will update all plots with the new data.

**Bubble Plot**

Bubble colour = Region  
Size of Bubble = Happiness Score  
X Values = GDP per Capita  
Y Values = Lifetime Expectancy  
Hover Text = Region and Happiness Score

Selector = Year

**3D Bar Charts**

X Values = Year  
Y Values = Happiness Score  
Hover Text = Region and Happiness Score

Selector = Country

**Data Sources**

We used Kaggel.com to get our data, we used following five SV files for our datasets that we

processed and cleaned to get our final dataset.

<https://www.kaggle.com/unsdsn/world-happiness?select=2015.csv>

<https://www.kaggle.com/unsdsn/world-happiness?select=2016.csv>

<https://www.kaggle.com/unsdsn/world-happiness?select=2017.csv>

<https://www.kaggle.com/unsdsn/world-happiness?select=2018.csv>

<https://www.kaggle.com/unsdsn/world-happiness?select=2019.csv>

**Task Breakdown**

1. Data cleaning and processing in Pandas - Jesse

2. Database creation in SQL – Isha

3. JavaScript coding for plots – Jessica

4. Coding for the choropleth map – Jesse

5. Rendering the HTML using Flask – Jessica and Isha

6. Project Presentation – All the team members