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| Course | Data Analytics Boot Camp |
| Assignment | Project #3: HTML and Data Visualization |
| Team | Group 3: Gurpal, Stephen, Carson, Clarajean |
| Due Date | Wednesday October 4th, 2023 |

**Overview**

Prepare a formal 10-minute presentation that covers the following topics:

· Questions that you found interesting and what motivated you to answer them.

· Where and how you found the data that you used to answer these questions.

· Data exploration and cleanup process.

· The analysis and visualization process.

· Conclusions: Numerical summary & Visualizations of the summary

· Implications of your findings: what do your findings mean?

**Assignment Requirements**

1. Your visualization must include a Python Flask-powered API, HTML/CSS, JavaScript, and at least one database (SQL, MongoDB, SQLite, etc.).
2. Your project should fall into one of the following three tracks:
   * A combination of web scraping and Leaflet or Plotly.
   * A dashboard page with multiple charts that update from the same data.
   * A server that performs multiple manipulations on data in a database prior to visualization (**must be approved**)
3. Your project should include at least one JS library that we did not cover.
4. Your project must be powered by a dataset with at least 100 records.
5. Your project must include some level of user-driven interaction (e.g., menus, dropdowns, textboxes).
6. Your final visualization should ideally include at least three views.

**Research Questions to Analyze:**

1. Which state won the most titles between 1958 - 2018, per decade? By Sport? - trend line (top 5 states per decade) – This will be analysed using a trend line chart.

2. Out of the state with the most titles, which city holds the most titles? - This will be analysed using a bubble chart.

3. Out of the state with the most titles, which sport holds the most titles? - This will be analysed using a pie chart.

4. Map showing the current (2018) most titles? With markers or heat map.

**Datasets to Be Used**

The Dataset below is for the Sport field:

<https://www.kaggle.com/datasets/thedevastator/winningest-cities-in-sports>

**Project Description/Outline**

The purpose of the project is to help people who are new to sports and are trying to get more information about which are the winningest states in the five major sports (NBA, NHL, NFL, MLB, MLS). The information will be learnt by using a chosen dataset, clean it, visualize the finding and analyse it in order to gain the information.

**Rough Breakdown of Tasks**

1. Clean database using Jupyter Notebook - **Gurpal & Clara**

2. Upload cleaned data to a URL using Flask - **Stephen**

- create a URL that displays the Database

3. Answer the questions using data analysis via JavaScript. Incorporate the URL and create a d3. Json. – **All members**

4. Use Leaflet, Chart.js tools to display visualizations on an HTML - **Carson**

- heat map and graphs for visualization

#######ROUGH SKETCH OF DASHBOARD########