UFO Sighting Visualization Report

**Purpose of the Visualization**

I have named the visualization of the UFO sightings “UFO SIGHTINGS EXPLORER. " The core idea of the visualization is to allow the user to explore the different UFO sightings geographically on a world map. In the map's initial view, all the sightings are plotted simultaneously, which provides the user with an immediate visual impression of where UFO sightings have occurred globally. Filters and sliders encourage the user to delve deeper into the data by allowing filtering based on country, shape, year, and sighting duration. These filters dynamically update the map in real time, making it easy to show how the different filters affect the distribution. A dynamic counter in the top-right corner gives users real-time feedback by displaying the total number of sightings on the map.

A screenshot of a map

AI-generated content may be incorrect.

**Link to visaulization**

<https://ufo-mvd6.onrender.com/>

**Questions Answered**

The visualization serves to answer a variety of questions regarding UFO sightings:

* *Where do most UFO sightings occur globally?*
* *Are there regions where sightings are more frequent than others?*
* *Does the shape of UFOs vary by region or country?*
* *Is there a relationship between shape and duration of observation?*
* *Has observed shape and duration changed over the years?*

**Interactivity Features**

The visualization includes several interactivity features like:

Dynamic filtering:

The dashboard includes dropdown filters for the country and UFO shape alongside controls for selecting a custom year range and adjusting the duration of sightings through a range slider.

Tooltips:

Hovering over an individual observation reveals a tooltip displaying information about the city, longitude, latitude, date, time, and shape of the observation.

Dynamic counter:

A dynamic counter in the top right corner updates the total number of observations on the map at any given filter selection.

**Design Principles & Decisions**

The visualization was built with Dash by Plotly, using the Bootstrap theme “LUX.” This theme was explicitly chosen to reduce visual noise and keep the attention on the map, allowing users to engage more directly with the data and explore patterns without visual clutter.

The map is built using the standard scatter\_map function from Plotly Express. A distinct blue color was selected for the data points to ensure they stood out clearly against the muted, grayscale background. This use of pre-attentive attributes strategically directs the user’s attention toward the plotted UFO sightings, enhancing focus.

The dropdown filters are placed vertically together on the left side of the visualization. The placement adheres to Gestlats’ principle of proximity, where elements placed close to each other appear to be more related than elements placed far from each other.   
The consistency in design intuitively reinforces usability.

The white heading and subtitle on the black header are chosen to give the user context without stealing attention.