UMN Data Visualization & Analytics

Project 1 Proposal

02-10-21

**UFO Sightings:**

**What are aliens up to these days?**

Project Title:

“UFO Sightings: What are aliens up to these days??”

Team Members:

Team 7:

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Project Description/Overview:

Our project is to uncover patterns in UFO sightings in North America. We’ll examine relationships between certain areas and the number of sightings; number of sightings throughout across each month of the year, and across each hour the day; and any other related questions, as the data permits. We would like to visualize our findings with the use of bar graphs, line charts, heatmaps, and other appropriate representations.

Potential Research Questions:

* Are there States or regions that have higher reports of UFO sightings (heatmap/pie chart/bar chart)?
* Do sightings occur more often during certain times of the year (bar graph/line chart/ scatter plot)?
* Do sightings occur more often during certain time of day (bar graph/line chart/ scatter plot)?
* Do aliens have a favorite place to visit (Use lat and lng data to get more specific sighting locations/ what city in the state is most frequently visited)?
* What do aliens like to drive (Looking at the reported shape or description of the sighting)?
* Display the summary report of the sighting when you either view the map or put in a location input and get a randomly matched response

Must do either:

Regression Test

* Can we try to predict the number of total sightings in 2021?
* What city will have the highest visits in 2021?
* Can we predict what region an alien is most likely to visit on their vacation to earth

Hypothesis Test

* We think alien sightings happen most frequently between 10pm – 2am
* We think alien sightings happen the most from Sept – Nov
* We think Mid-West will have the most alien sightings
  + Lot of cows to abduct!!
* Is Area 51 (Nevada) truly the hub of recorded alien sightings

Data:

* We want to look at UFO sightings data, specifically in North America
  + We will narrow our focus to just the US
* We would look for csv files with sighting reports to analyze
  + ~~Potentially merging two files together~~

Possible Data Sets: (CSV files)

* ~~National UFO Reporting Center US/Canada reports (2016)~~
  + [~~https://data.world/aarranzlopez/ufo-sights-2016-us-and-canada~~](https://data.world/aarranzlopez/ufo-sights-2016-us-and-canada)
* UFO Sightings – **We are leaning toward only using this one as it has multiple years**
  + <https://www.kaggle.com/NUFORC/ufo-sightings>

Rough Breakdown of Tasks:

* Define the core message or hypothesis
* Exploration for viable Datasets
* Git Boss activities
* Loading data and setting up paths
* Data Cleanup
* Data Analysis and Calculations
* Visualization
* Observation Analysis
* Presentation