**DATA 500 – UFO Project Meeting Agenda  
Date: 10/19/2025**

**Time: 7pm (6:30 for GitHub exploring)**

**Location/Platform: Teams**

**Team Members:**

* **Ben**
* **Isabella**
* **Carly**

## **Individual Angles / Focus**

* **Teammate 1:**
  + **(state/county patterns, hotspots, shapes, trends).**
* **Teammate 2:** 
  + **Temporal / frequency analysis (yearly, monthly, weekly, time of day).**
* **Teammate 3:**
  + **Other regions / UFO types / population correlations (urban vs rural, East vs West, etc.).**

## **Research Questions**

### **Regional / Midwest Focus (Teammate 1)**

* **Which Midwest states or counties report the most UFO sightings?**
* **Are there “hotspot” cities with significantly higher sightings than neighbors?**
* **Do sightings cluster near natural features (lakes, forests) or urban areas?**
* **Are certain UFO shapes more common in the Midwest than in other regions?**
* **How does the duration of sightings vary by state or type?**

### **Temporal / Frequency Analysis (Teammate 2)**

* **What months or seasons see the most UFO sightings?**
* **Are sightings more common on weekends vs weekdays?**
* **Does time of day affect frequency (daylight vs nighttime sightings)?**
* **Are there any long-term trends (increase or decrease in reports over decades)?**
* **How does the duration of sightings change over time?**

### **Other Regions / Demographics / UFO Type (Teammate 3)**

* **How do UFO sightings in other U.S. regions compare to the Midwest?**
* **Are certain UFO shapes more frequently reported in specific regions?**
* **Are sightings more common in high-population vs low-population areas?**
* **Do rural or urban areas have different reporting patterns for duration or type?**
* **Is there a correlation between weather conditions and sightings in other regions?**

### **Combined Questions**

* **Are certain UFO shapes more likely to be reported during specific weather conditions or times of year?**
* **Can we identify unusual spikes in sightings that might correspond to public events or media coverage?**
* **Are reporting patterns affected by population density, city size, or proximity to major landmarks?**

## **Initial Visualization Ideas**

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| **Focus** | **Suggested Visualization** |
| **Midwest patterns** | **Heatmap or scatter map by state/county** |
| **Temporal trends** | **Line chart by year/month/day; bar chart by hour of day** |
| **UFO shapes/types** | **Bar chart of most frequent shapes** |
| **Duration / size** | **Boxplots of duration by type/location** |
| **Population / urbanization** | **Scatterplots of sightings vs population density** |

## **Pre-Meeting Questions for Professor**

1. **Should we focus only on Midwest states or include all U.S. regions?**
2. **How detailed should our exploratory analysis be for the proposal?**
3. **Are there preferred visualization types or Python libraries?**
4. **How should we handle missing or inconsistent data—just note it, or perform imputations?**

## **Needed for 10/30 meeting**

1. **Each teammate completes their initial visualizations.**
2. **Skip Thursday (10/23) and use the time for analysis.**
3. **Regroup on Thursday, 10/30 to review findings and combine them into a draft proposal.**

## **What is due next**

**Due on November 14, 2025:**

**Please keep in mind the following information:**

**Each team needs to submit a project proposal in the form of a PDF file or Word document. This document should consist of a 2-3 page summary describing the chosen dataset (including the data source) along with an initial exploratory analysis and data visualizations. An example of a project proposal is available on Blackboard. The report should include the following at minimum:**

** Dimensionality: number of rows and columns**

** Description of what each row represents (e.g. a person, a location, etc.)**

** Description of each column: possibly in the form of a formatted table containing each column name, column data type (or class), and a description that includes the meaning of values that a certain column may take.**

** In case of missing values, a count of the number of missing values by column.**

** Some graphs for numerical and categorical variables are expected (including description of them)**