**Group 2 Proposal: Vanishing Underground: Analyzing the Correlation Between Missing Persons and U.S. Cave Systems**

**Category**: True Crime

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**Introduction**

Our project, "Vanishing Underground: Analyzing the Correlation Between Missing Persons and U.S. Cave Systems," aims to investigate the possible connections between missing persons cases and the proximity to cave systems in the United States. By layering various datasets onto a U.S. map, we aim to uncover patterns that might provide insights into these disappearances.

**Objectives**

1. **Map Integration**: Create an interactive map that overlays multiple datasets, including missing persons cases, cave systems, unidentified remains, and Wayfair factories.
2. **Data Collection**: Use web scraping techniques to gather up-to-date information on missing persons and unidentified remains.
3. **Analysis**: Perform spatial analysis to identify correlations between missing persons and cave systems.
4. **Visualization**: Utilize GeoJSON, Leaflet, CSV, and JavaScript to visually represent the data and findings.

**Methodology**

1. **Data Collection**:
   * **Web Scraping**: Extract data on missing persons and unidentified remains from various online sources.
   * **Existing Datasets**: Acquire data on U.S. cave systems and Wayfair factory locations from publicly available databases.
2. **Data Processing**:
   * **CSV Handling**: Organize the collected data into CSV files for easy manipulation and analysis.
   * **GeoJSON Conversion**: Convert location-based data into GeoJSON format to facilitate mapping.
3. **Mapping and Visualization**:
   * **Leaflet Integration**: Use Leaflet, an open-source JavaScript library, to create interactive maps.
   * **Layering Data**: Overlay different data layers onto the map to visualize the spatial relationships.
   * **Interactive Features**: Implement interactive features.
4. **Analysis**:
   * **Spatial Correlation**: Analyze the spatial data to identify any significant correlations between missing persons cases and cave systems.
   * **Pattern Detection**: Use statistical methods to detect patterns and anomalies in the data.

**Tools and Technologies**

* **Web Scraping**: BeautifulSoup, Scrapy
* **Data Handling**: Pandas (Python)
* **GeoJSON and Mapping**: Leaflet, GeoJSON, JavaScript
* **Visualization**: D3.js, Plotly

**Expected Outcomes**

* An interactive map displaying the correlations between missing persons, cave systems, unidentified remains, and Wayfair factories.
* Detailed analysis reports on the findings, highlighting any significant patterns or trends.
* A public platform for exploring the data and raising awareness about the connections between these datasets.

**Conclusion**

By combining data from various sources and utilizing advanced mapping and visualization techniques, our project aims to shed light on the potential connections between missing persons and cave systems in the U.S. This research could provide valuable insights for law enforcement, researchers, and the public in understanding and addressing these mysterious disappearances.

**Websites:**

[Archived | Lost but Not Forgotten: Finding the Nation’s Missing | National Institute of Justice (ojp.gov)](https://nij.ojp.gov/topics/articles/lost-not-forgotten-finding-nations-missing)

[49636850-163126762906851\_origin.png (1282×718) (seekingalpha.com)](https://static.seekingalpha.com/uploads/2021/9/10/49636850-163126762906851_origin.png)

[Cave Systems and Missing Persons Cases (arcgis.com)](https://storymaps.arcgis.com/stories/93e1afa1823740c28f2341b8eb4c2dbc)

[Wanted API — FBI](https://www.fbi.gov/wanted/api)

[jaysnel/fbi-missing-person-api (github.com)](https://github.com/jaysnel/fbi-missing-person-api)

[Creating a missing persons API : r/webdev (reddit.com)](https://www.reddit.com/r/webdev/comments/jjoa5j/creating_a_missing_persons_api/)

[Home - The True Crime Database](https://www.thetruecrimedatabase.com/)

[Cave and Karst Resources | Galleries | Northeast CPA (databasin.org)](https://nalcc.databasin.org/galleries/cc47fed049c94b469caeb52243962548/)

[Cave and Karst Data Access — Landscape Partnership](https://www.landscapepartnership.org/research/applcc-funded-projects/classification-and-mapping-of-cave-and-karst-resources/cave-and-karst-gis-data)

[Cave Systems and Missing Persons Cases (arcgis.com)](https://storymaps.arcgis.com/stories/93e1afa1823740c28f2341b8eb4c2dbc)