Final Project: Choose your adventure

Total: 10 points

GOAL

Perform real crime analysis work - either strategic or tactical - on new data.

This project allows you to choose your "favorite" set of projects this semester, and replicate it using new data. Quick recap of your options:

1. Strategic crime analysis
    a. Projects 1-3
2. Tactical crime analysis
    a. Project 4-7

DATA

There are two options.

1. For strategic crime analysis, get your crime data from here or somewhere similar.
    a. You choose the event types (crime, calls, arrests, etc.) and an agency
    b. If you find similar data elsewhere, you can use that - just make sure it's large enough (thousands of records over 5+ years)
2. For tactical crime analysis, get your crime data from here.
    a. It's the same original data as Project 4.
        i. It's real, actual crime events from a collection of serial offenders.
    b. If you want to augment what you find here with additional details you find through open source research, go for it
        i. If you use additional sources, please make sure to cite as necessary (provide a URL for the source in the notes of the applicable slide(s))

METHODS

Your projects depend on the project you choose to replicate.

1. Strategic Forecast
    a. Using RStudio, read in your data, format the date, add columns for new variables, calculate statistics, create visualizations, and build a forecast
    b. Unlike Project 3, ***you only need one forecast***
2. Tactical Prediction

a. Using Excel/Google Sheets and ArcGIS, identify a crime series, analyze its behavior, space, and time components, create a crime pattern bulletin

SUBMISSION

Once your analysis is complete, please submit your project via Canvas.

Your submission depends on the project you choose:

- Strategic: a usable HTML file, via RMarkdown
- Tactical: a crime bulletin set of slides

GRADES

- **Strategic (10pts)**
  - Build a forecast for one specific crime/call type, including
    - A bar graph of the number of expected crimes to occur in a future month (depending on available data), per day (**2pts**)
    - A temporal topology of relevant crimes by day of week and hour of day, faceted by year (**2pts**)
    - A hotspot map of relevant event data, including the D.C. outline and streets, faceted by year (**2pts**) [*See Project 2*]
    - One paragraph (4-6 sentences) explaining the findings of your forecast, including where and when you expect this crime to occur in D.C. this month (**3pts**)
  - Provide any citations for data sources used (**0.5pts**)
  - Project created in RMarkdown and submitted as an HTML or PDF via Canvas (**0.5pts**)
- **Tactical (10pts)**
  - Executive Summary, Area Orientation, and Conclusion **(1pt)**
  - Behavior **(2pts)**
    - Details on the *WHAT*, *WHO*, and *HOW*
    - Describe the 'archetype' case in the series
    - Predict the behavior of the next event
    - Include at least 1 visual
  - Space **(2pts)**
    - Provide at least three spatial details, including
      - Hunting Ground analysis
      - Ellipse/centroid/sequencing analysis
      - Any other noteworthy patterns in the data
    - Predict the location of the next event (1pt)
    - Include at least 1 visual (1pt)
  - Time **(2pts)**
    - Provide at three temporal details, including
      - Interval analysis
      - Day of Week analysis
      - Any other noteworthy patterns in the data

        - Predict the date/time of the next event (1pt)
        - Include at least 1 visual (1pt)
    - Intervention Strategy **(2pts)**
        - Include at least 1 visual (1pt)
    - Provide any citations for data sources used (**0.5pts**)
    - Project created in PowerPoint or Google Slides and submitted as a PDF via Canvas (**0.5pts**)

Please email me with any questions.