Project #5: Terrorism

This assignment is due to Canvas before the 11:59 PM ET on Monday, March 25th. The paper should be typed, 12 pt. font, double spaced, and the whole assignment in **one single PDF file**, including copies of all supporting material identified below. I will not accept assignments that are not combined as a single file, and please do not exceed the space limit of two written pages of analysis–the grading will stop there.

This is to be independent work. If assignments closely resemble the work of another student (past, present, or future) then you run the risk of being submitted to the College of the Liberal Arts for academic misconduct (even after you finish the course). TurnItIn will be used AFTER you submit your assignment to check for authenticity. **Review the project overview page for Academic Integrity issues (https://psu.instructure.com/courses/1973867/pages/avoiding-plagiarism)** .

This project will look at global terrorism since 1970. This data is collected by the **Global Terrorism Database (https://www.start.umd.edu/)** from the National Consortium for the Study of Terrorism and Responses to Terrorism (START). The program is run through the University of Maryland and is the same dataset we used in class to analyze terrorist attacks. Again, the dataset will be very large (181,000 rows) because you're analyzing every terror attack for almost 50 years, but there is a lot of detailed data. I have gone in and removed some of the variables to make it more manageable. If you'd like to see the full data set, you can **download it from Kaggle (https://www.kaggle.com/START-UMD/gtd)** . This project will ask you to arrange 4 data visualizations for your dashboard. Here's a look at **some of what you'll complete (https://public.tableau.com/views/MyWork_15/Dashboard1?:embed=y&:display_count=yes)** , but notice mine only has 3.

Data Sources

Global Terrorism Database (https://drive.google.com/open?id=15Jfr1kS8v61EMRhuK7aS9pLEEP-ruqGE) (this is the parsed down dataset)

Here's What to Do

Download the parsed down Global Terrorism Database data using the link above. After you finish your data visualizations, identify a terrorist attack that had occurred in your state before September 11, 2001. Look up information on this attack and summarize the event in your write-up.

Tableau Work

We will use Tableau to edit some of the data for your visualizations to work out correctly. Open Tableau, and Connect your Excel file with this new workbook. Create a new worksheet and title it "Bubbles."

We'll start by characterizing some of the measures and dimensions listed. Identify the measure titled Country txt and update it to a Dimension by labeling it as a geography variable at the country/region level. There are some countries that no longer exists, but you should update the results to match their current locations. You'll do this in your first data viz. Be sure City and Provstate are both labeled as geographic measures, one for city and the other for State/Province.

Terrorism by Country

On the first worksheet, select "Country txt" as the dimension and "Eventid" as the measure. In the "Show Me" pane, select packed bubbles as your visualization. Currently, the sheet is summing the values in Eventid, but we want it to count those. In the Marks pane, change the size of the bubbles to be based on the count of the number of events. The Global Terrorism Database also codes the countries by region, so drag the "Region Txt" Dimension and drop it on the Color marks. The bubbles are now color-coded by regions of the world. This will be a searchable feature on your dashboard later.

Be sure to update the features of your data visualization to ensure they look good. For example:

- Add a title to describe your visualization
- Update the labels to be a bit larger and bolded
- Update the tooltip to be make more sense for hovering
- Update the legend title
- Update missing observations by going to the main menu, selecting "Map > Edit Locations." Update the old locations to their current borders.

Target & Method of Attack

Create a second worksheet and rename the sheet "Target & Method." On this worksheet, we will look at the most common targets of terrorism (locations) and break those attacks down by method of attack. Select Eventid and move it to the columns section and change the measure to count. Select Targtype and move it to the rows section. Sort the results from most common to least common. Drag attacktype to the color box in the marks pane. This will cause your horizontal bars to be broken down by the type of attack on each target.

Be sure to update the features of your data visualization to ensure they look good, including:

- Update your title to reflect what's being shown.
- Change your horizontal axis to show full values, not "K"
- Combine "other" and "unknown" for the targets and relabel it as "other/unknown"
- Update the axis labels
- Update the legend title
- Fix axis if words are being cutoff
- Update the Tooltip to remove variable names and replace with more appropriate names

Violence in the United States

The next two visualizations will look at attacks on the United States and your particular state. Create a new worksheet and title it "US Map." Place Country_text in the filter and only show results for the United

States.

Select both City and Provstate from the Dimensions section and select the symbol map from the "Show me" tab. You can select only the contiguous US states to keep the map manageable. From the Dimensions section, select weapon and drag to the "color" box on the Marks pane. This will color code each attack based on the weapon that was used in the attack.

Add the "Year" dimension to the tooltip box so that when people hover over the text, they can see the year the event occurred. Right click on Year in the dimensions pane and change the default number format to be a Number (Custom) with no decimals and no thousands separator.

Because some cities have multiple attacks in a given year, it's hard to see the dots of multiple events. To help some, add "weapon" to the size bubble. This will create a layer on top of cities that have multiple attacks to at least show when multiple attacks have occurred. This isn't a perfect solution, but it helps.You can hide the Weapon legend since the size isn't necessary for analysis.

Be sure to update the features of your data visualization to ensure they look good, including:

- Add a title to describe your visualization
- Update the tooltip box so that the hover message is cleaner
- Group "Other" and "Unknown" from the weapon legend and re-label this group as "Other/Unknown"
- Place the "other/unknown" group at the bottom of the legend.
- Update the weapon legend

Targets in Your State

Create a new worksheet that will mimic the previous viz, but focus instead on your state and and the targets, rather than the weapon used. Drag Provstate to the filter and select your state from the list. Select City and Provstate from the Dimensions list then select the symbol map from the "Show Me" pane. In the bottom right corner, update city locations if Tableau says it has unidentified locations.

Select Eventid from the Measures list and drag to the Size box on the Marks pane. Change the measure to a count rather than a sum. Drag targtype to the color box on the Marks pane. This will color code your dots by the target attacked.

Be sure to update the features of your data visualization to ensure they look good, including:

- Add a title to describe your visualization
- Increase the size of your dots to make them more prominent (don't overdo it!)
- Group any targets that seem similar and rename the grouping
- Rename your legends to remove the variable name
- Update the tooltip box so that the hover message is clean
- Change the opacity in the color section since some big cities may have multiple dots

Dashboard

To complete your data visualization, create a New Dashboard and label it "County Level Crime." Change the dimension on the dashboard to be 800 wide and 1100 tall so that it mirrors the dimension of a sheet

of paper. The dashboard is your chance to arrange your visualizations that you've created before sharing them with the public. Think about the best way to arrange your visualizations and use the "objects" pane on the left side to arrange pieces to tell a story. Review **Tableau's Best Practices for Effective Dashboards** **(https://onlinehelp.tableau.com/current/pro/desktop/en-us/dashboards_best_practices.htm)**.

Be sure your dashboard has at least the following items:

- A clear, distinct title
- A brief description less than 150 words
- Each of the 4 visualizations you made
- Highlight tools and legends to make your work interactive
- A note of the source of your data file

Each of the visualizations on your dashboard should be fitted to the boxes (no scroll bars). This can be done by clicker on "More Options" within each visualization and selecting "Fit > Entire View." You will also save your dashboard as an image to include in your write-up. To save your dashboard as an image, select "Dashboard" from the menu bar and then select "Export Image" to save the dashboard as a .png file.

Extract your data by going to "data" in the menu bar, selecting the title of your sheet, and then "Extract Data." Save this file with your other project files. To publish your dashboard to your Tableau Public account, select "Server" from the menu and select "Publish Workbook." When your Tableau Public account opens, be sure have your dashboard public. In the bottom corner of your visualization is a sharing icon, which will provide a sharable link. If you use this link on your social media accounts, please tag me (@Wootenomics). You'll use this link to **submit your dashboard for grading (https://psu.instructure.com/courses/1973867/assignments/10601853)**. 50% of your project grade comes from peer reviews completed by your classmates. 25% of your project scores come from **peer reviewing your classmates (https://psu.instructure.com/courses/1973867/assignments/10602117)**.

Write Up

You have two pages to summarize any readings associated with this project, to summarize your data, and summarize the data visualizations that you created. Be sure to define any variables you are analyzing, discuss the purpose of converting to similar rates, and discuss these outcomes with what we have talked about in class. Be sure that you are citing material correctly and quoting outside sources appropriately with proper in-text citations for any material you discuss in your write-up, including the articles mentioned above and any databases we use.

Appendix Material

In the appendix (material after your analysis), include a reference page that lists your references in APA format. Any additional references you decide to include should also be cited parenthetically and included

in the reference page. Next, add your exported Tableau dashboard. The entirety of the file should be saved as one single PDF and uploaded to Canvas.

Here's the order:

- 2 page analysis
- Reference list
- Dashboard image export & link

Ready to Submit?

To submit your project, do the following:

1. Publish your data visualization to your Tableau Public profile.
2. **Submit the link to your completed dashboard (https://psu.instructure.com/courses/1973867/assignments/10601853)**
3. **Submit your final PDF** **(https://psu.instructure.com/courses/1973867/assignments/10601752)**

Peer Grading

Part of the learning process (and your grade) is to evaluate other student's on their organization, presentation, and accuracy of the same dashboard you just completed. Your role as the peer grader is anonymous to the other students you are grading. By providing honest feedback, you can help improve not only their projects, but your future ones as well. You will not be grading their paper, but only their dashboard. You will be grading on the quality of the work, not on the actual completion of the work. I need you to be critical.

One of the reasons for this is for you to learn some valuable skills in providing feedback, but also to think deeper about how you can improve your own presentation. After the projects are submitted, you will be assigned to peer review 5 dashboards through the Canvas system. You will be use a rubric to judge the quality of work submitted and a portion of your final grade will come from the grading of others. You can see your list of students you've been assigned by going to the **dashboard submission page (https://psu.instructure.com/courses/1973867/assignments/10601853)** in Canvas.

The grade you receive on your project will be comprised of your written analysis, the median score of your peers, and the completion of peer grading. Each peer review you complete will be worth 5% of your project (up to 25% of your grade). 50% of your overall score will come from the median score you receive from your peers and the remaining 25% of your score will come from your written work.

For each project, I will randomly select 20 students and evaluate your ability to provide accurate reviews and constructive feedback. Your role as a peer grader is anonymous, so I expect you to provide open and honest feedback to help them in the course. If you are found to be inflating grades or shirking on the peer grading portion, you will not receive credit for any peer reviews you complete on that project.