

# Terrorist Attacks in the United States

Julio Lopez

University of Colorado, Boulder

Julio.Lopez@colorado.edu

## ABSTRACT

Ever since the tragic events that took place on September 11<sup>th</sup>, 2001, the United States has been on high alert attempting to seek out and prevent future attacks to the country. As the world continues to battle against this terrible force, we must continue to do our part and arm ourselves with knowledge about terrorism using the information available to us online. The growing simplicity in falsifying the news presented to the public, I decided the best way to get a better understanding was to use the data provided to create my own visuals to ensure against the biases from various news sources.

**Keywords:** Terrorism, Global Terrorist Database (GTD)

## 1 INTRODUCTION

The United States lives within its own isolated section of the world when it comes to the news we read. Very little of the information the nation consumes is on global events [1], and much of the country is divided by where they get their news from. Furthermore, visualizing data in an effective manner is not a simple task. Even with an abundance of useful data, the message that it portrays can fall flat without the correct implementation [2]. I was not too sure what sources to believe while doing research of my own, so using what I learned from this class, I decided to make my own set of visuals to more closely understand terrorism in the United States.

The dataset used was from the Global Terrorist Database (GTD) found on Kaggle [3]. The data includes over 170,000 entries on terrorist activities around the world with information such as the day, number injured and killed, and summaries on the event. With this much data, I thought that using python's Pandas [4] would make the data easier to clean and interpret. After cleaning the data, I used the simplicity and flexibility of python's Seaborn library [5] to create the visuals shown.

## 2 TERRORISM IN UNITED STATES SINCE 2000

The biggest terrorist act in the United States occurred on September 9<sup>th</sup>, 2001, and caused a nationwide agreement to take precautions in the future to prevent another catastrophe like this to happen again. The first three results in a google search for "Terrorist attacks in the United States since 2000" are the Wikipedia page for Terrorism in the United States, an article on theguardian.com, and an article from CNN respectively.

The Wikipedia page provides an overview of the subject, like it usually does, but each of the articles had their own separate way to talk about the subject.

### 2.1 News sources

The article from theguardian.com talks about a history of terrorism in the United States starting from 1970 [5], which is the same start date as from the GTD found on Kaggle. As a result, I suspect that they used the same data that I did, but was surprised to see the way they used it. Their most effective visual was a map of the United States with points showing where the attacks happened, but failed to give any sort of context as to what each point was supposed to represent. Despite this, the article was effective in what it wanted to show to the public, but the visuals could have been more effective. The article by CNN [6] took special care in what it wanted to show. The title of the article *US Terrorist Attacks Fast Facts* implies that a quick summary of the history of terrorism will be presented. Each point they make only summarizes individual events of those committed by Arabic names that had caused the most damage.

### 2.2 My findings

In my exploration of the data, I focused on information from 2000 to 2016 that were committed in the United States. Using Seaborn, I counted the number of occurrences that happened in each year and put them in a bar chart alongside each other, see Figure 1.

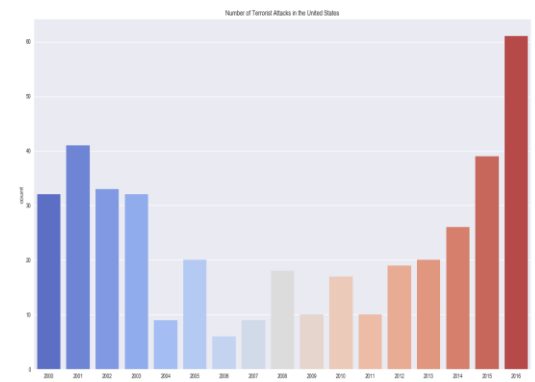


Figure 1: How many terrorist attacks happened in the United States in the 21<sup>st</sup> Century.

What I found was that the number of attacks was relatively high at the beginning of the century, and showed good signs of decreasing after the events of 9/11. This implies that the United States' efforts were paying off in preventing these attacks from happening. After a few years of this, the number of attacks began to rise again, reaching record numbers by the end of the decade. With the then recent increase in popularity and functionality of smart phones [7], the amount of information absorbed by the average person began to increase, giving terrorist events an increased audience.

I picked this color pattern because of the patriotism the red, white, and blue all invoke, as well as having the most screen space due to how the nature of the bars. I made red the color on the right as a way to show that this increase in activity is both important and dangerous, drawing more attention to the recent upward trend.

### 3 LOCATIONS OF ATTACKS

Another question I had for the dataset was where was most likely to be targeted. Since the attacks of 9/11 were in New York with another aiming for the pentagon, I wondered what might be some of the variables that determined where a terrorist might strike. The information I found on this topic was difficult to find, asking the question as to why so little research has been done to help find an answer to this question.

#### 3.1 Research

A paper discussing terrorism in the ten years following 9/11 [8] has a simple, but effective chart that summarizes what they found on page 3. What I found surprising was how concentrated the attacks seemed to be in California, and how no other state was even relatively close to it. The use of a table like this leaves a lot to interpretation and wonder to how the numbers were received. A simple chart is not memorable and is quickly looked over, despite of the meaning behind the data being potentially very powerful.

I previously mentioned how the Guardian had a simple visual that used geologic data to map information to a map of the united states, see figure 2.

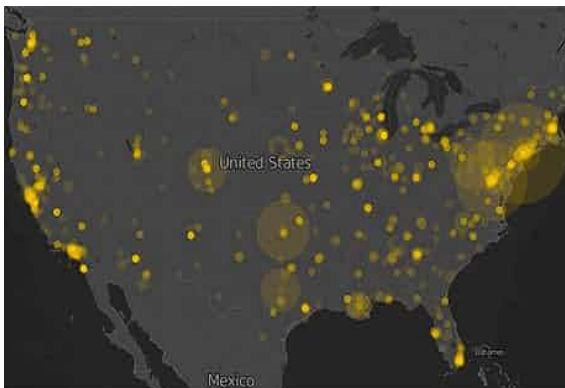


Figure 2: Locations of terrorist attacks in the United States after 2000

This was effective in showing the relative location of terrorist attacks across the country, but the lack of labels asks the question of what the size of the marks means to relative to one another.

#### 3.2 My findings

Like the first visual, I focused the dataset on the information of terrorist events in the United States after the year 2000. Using Seaborn, I separated the events by state and set them in a bar chart alongside each other, see figure 3.

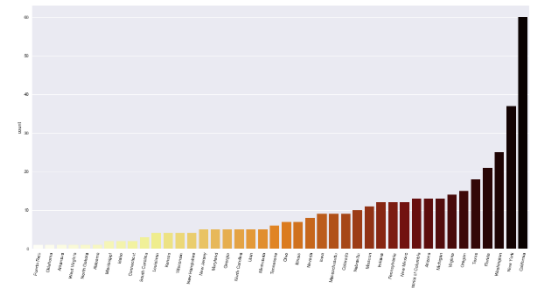


Figure 3: Locations of terrorist attacks in the United States after 2000

Through this visual, and with help from the one in the Guardian, it appears that many of the events that happened are focused on the states that have significantly larger cities than others. This unfortunately makes locations like California and New York much more likely to be targeted, but also gives us a better idea of where investing in security would be the most beneficial.

### 4 CONCLUSION

Terrorism is still an issue that plagues the world, but increased and faster access to information may be one of the best ways to combat this. I would like to continue to explore this topic in the future because of the amount of information available in the dataset and as my abilities in this field improve. The amount of information that news sources can falsify is frightening, and leads to the separation that we see in the United States to this day. Visuals may be the way to bypass this and by being more interpretable than any article, and communicating messages in a way that is much more natural to humans.

### ACKNOWLEDGMENTS

National Consortium for the Study of Terrorism and Responses to Terrorism (START). (2017). Global Terrorism Database [Data file]. Retrieved from <https://www.kaggle.com/START-UMD/gtd>

<https://www.kaggle.com/ash316/terrorism-around-the-world> User I,Coder on kaggle for helping inspire this paper with this powerful visuals.

## REFERENCES

- [1] <http://www.passblue.com/2016/10/07/young-us-graduates-falter-in-knowledge-of-world-affairs-a-survey-finds/>
- [2] <https://www.newamerica.org/in-depth/terrorism-in-america/part-i-overview-terrorism-cases-2001-today/>
- [3] <https://www.kaggle.com/START-UMD/gtd>
- [4] <https://pandas.pydata.org/>
- [5] <https://seaborn.pydata.org/>
- [6] <https://www.theguardian.com/news/datablog/2013/apr/17/four-decades-us-terror-attacks-listed-since-1970>
- [7] <https://www.theguardian.com/technology/2012/jan/24/smartphones-timeline>
- [8] [https://www.start.umd.edu/sites/default/files/files/announcements/BackgroundReport\\_10YearsSince9\\_11.pdf](https://www.start.umd.edu/sites/default/files/files/announcements/BackgroundReport_10YearsSince9_11.pdf)