Midterm-Global Terrorism

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Contents

Introduction

The talk and threat of terrorism has grown substantially over the last 20 years. It is not just here in America that we face these fears, but it is across the globe. The following analysis looks at the types of threats and violence that every day people has faced sinced the 1970s.

Data Set The data set used in this analysis comes from the Global Terrorism Database, which is an open-source database that includes information on terrorist attacks starting in 1970 and going all the way through 2017.

Questions to be addressed For this analysis I will be looking at the amount of terrorist attacks there were throughout the years. Finding particular regions that were hit the hardest and the type of weapons that were used more predominantly in these attacks.

Methods

Utilize Explortary Data Analysis to clean the data, extract main variables from the dataset and visualize the key information.

Analyze

```
terrorism <- read.csv("globalterrorismdb_0718dist.csv")
```

Load Data

Explore Data There are 135 variables(quite a lot) and 181691 observations

check na values There is huge amount of data lost, and we only need particular important variables, so we can reconstruct the data frame with key variables left only.

Create new dataframe

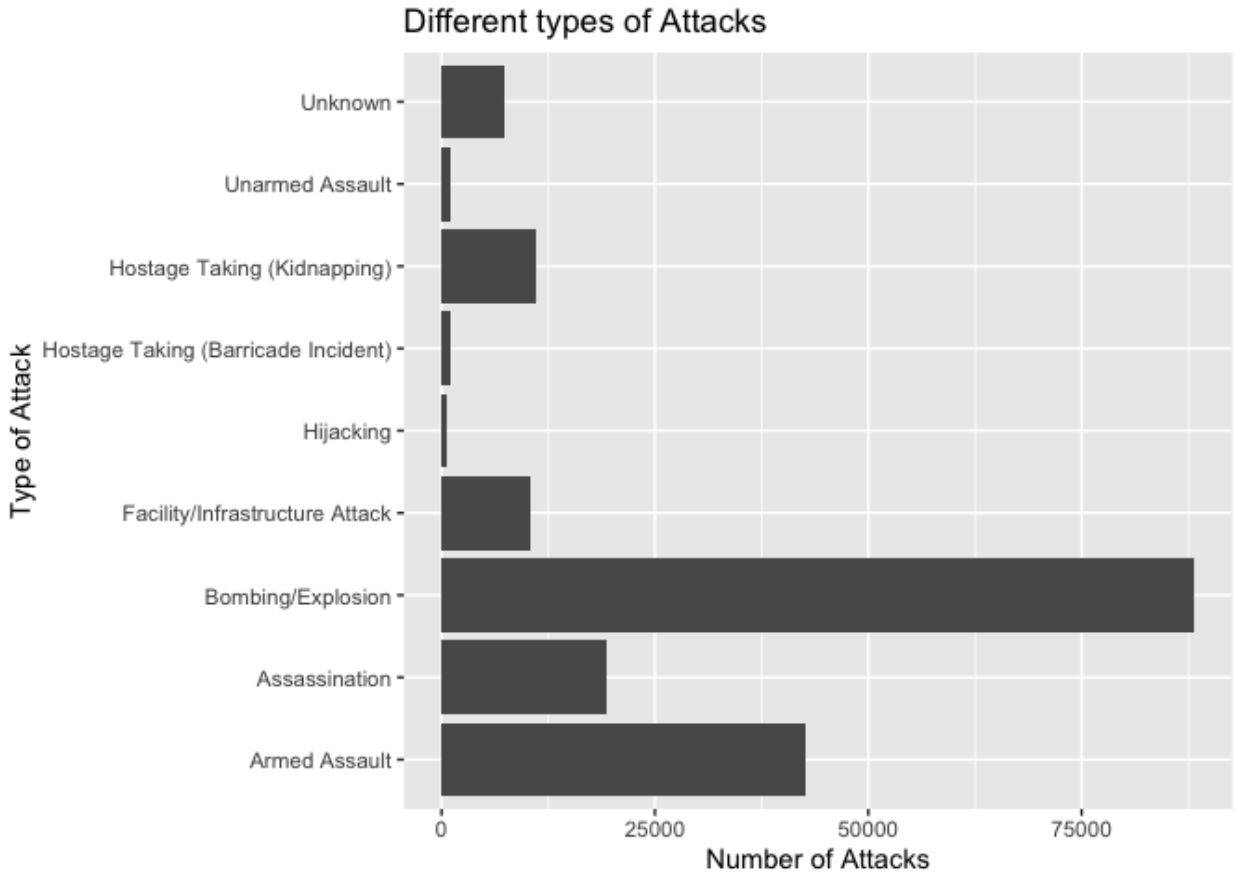
EDA of new dataframe About 1.1271885 % data was missing, which is tolerable

```
terrorism %>%
  summary()
```

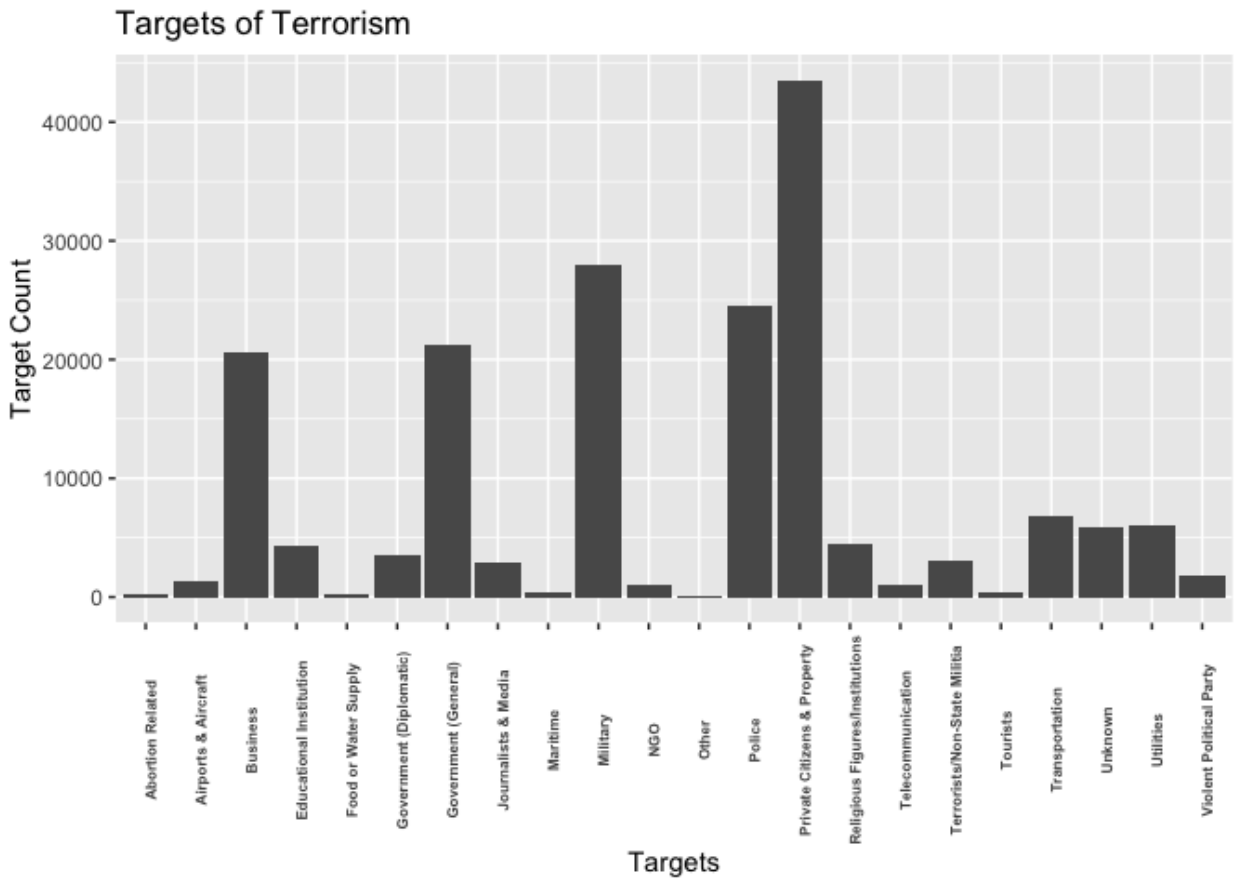
Statistics summary

```
##       Year          Month             Day           Group
##  Min.   :1970   Min.   : 0.000   Min.   : 0.00   Length:181691
##  1st Qu.:1991   1st Qu.: 4.000   1st Qu.: 8.00   Class :character
##  Median :2009   Median : 6.000   Median :15.00   Mode  :character
##  Mean   :2003   Mean   : 6.467   Mean   :15.51
##  3rd Qu.:2014   3rd Qu.: 9.000   3rd Qu.:23.00
##  Max.   :2017   Max.   :12.000   Max.   :31.00
##
##    Country             Region             State              City
##  Length:181691      Length:181691      Length:181691      Length:181691
##  Class :character   Class :character   Class :character   Class :character
##  Mode  :character   Mode  :character   Mode  :character   Mode  :character
##
##
##
##
##   Attacktype         Targettype           Weapon              Kill
##  Length:181691      Length:181691      Length:181691      Min.   :   0.000
##  Class :character   Class :character   Class :character   1st Qu.:   0.000
##  Mode  :character   Mode  :character   Mode  :character   Median :   0.000
##                                                           Mean   :   2.403
##                                                           3rd Qu.:   2.000
##                                                           Max.   :1570.000
##                                                           NA's   :10313
##      Wound
##  Min.   :   0.000
##  1st Qu.:   0.000
##  Median :   0.000
##  Mean   :   3.168
##  3rd Qu.:   2.000
##  Max.   :8191.000
##  NA's   :16311
```

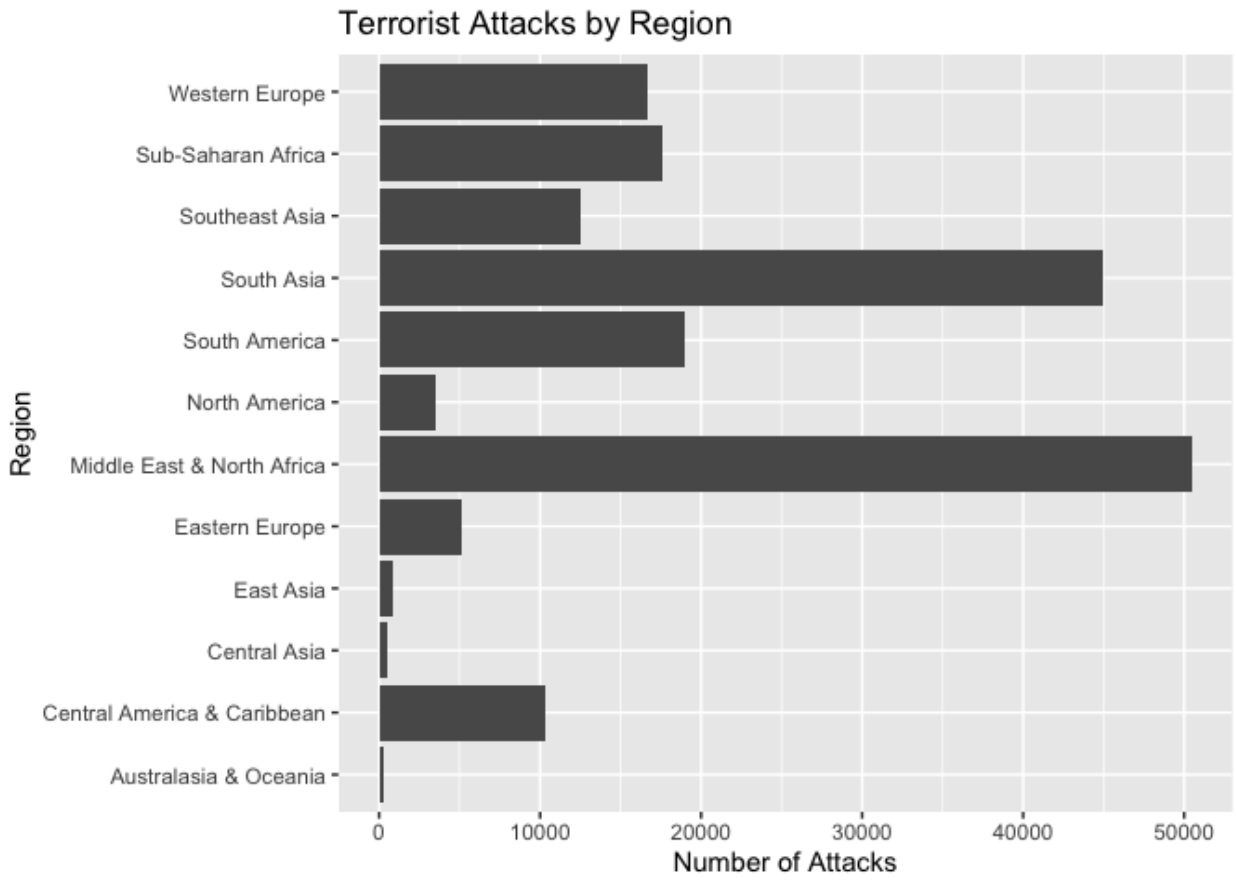
Data Visualization



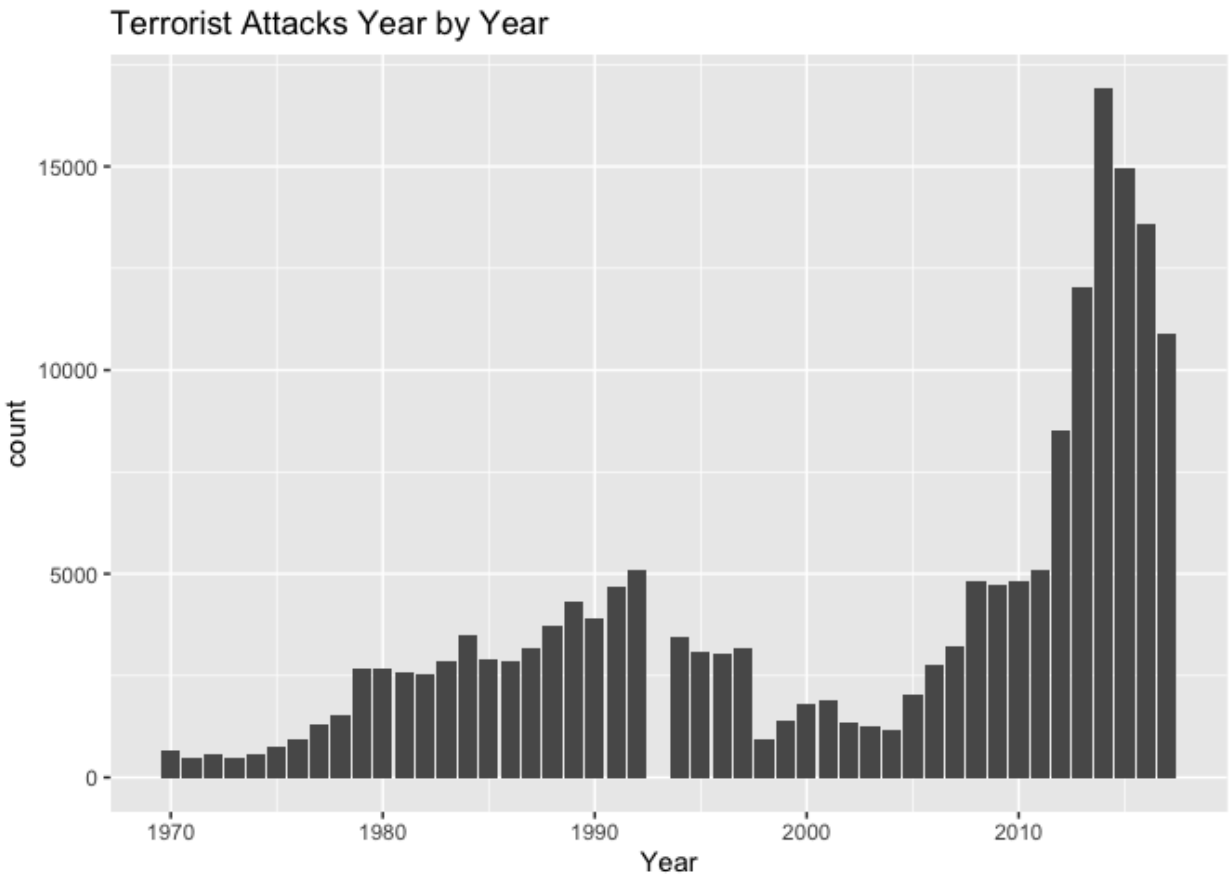
The above graph shows that the most common used attack by terrorist groups was bombing/explosion.



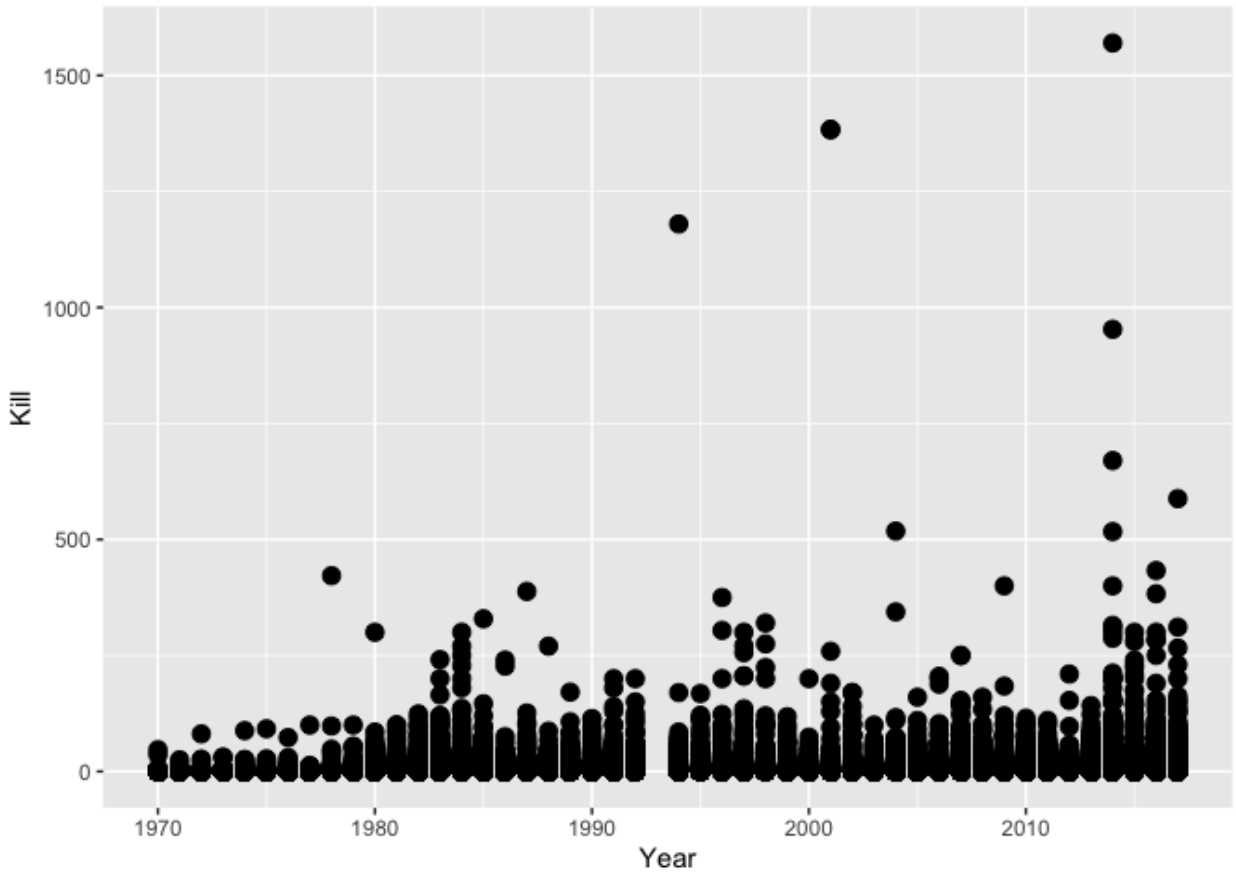
Private citizens and property were the most targeted group of people around the globe.



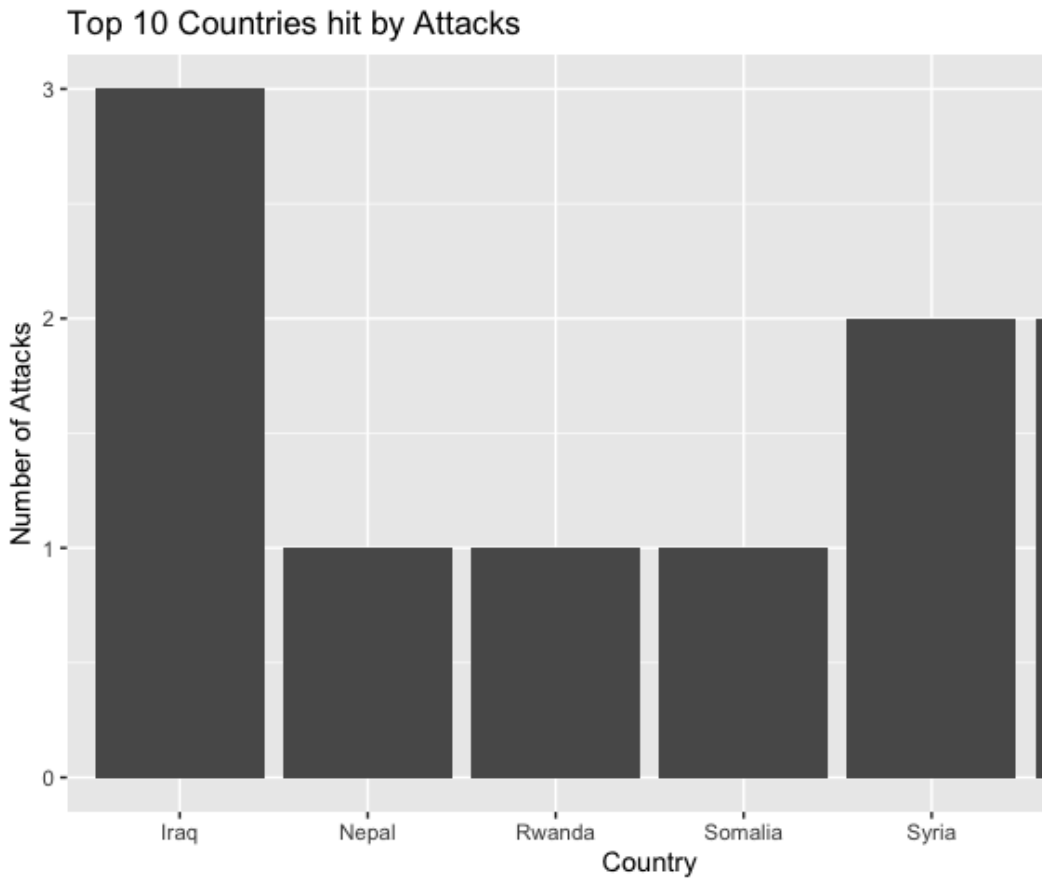
The middle East and North Africa had the most attacks occur in their region over the timeline of this data collection.



It was interesting to see the climb in terrorist attacks in just the last 10 years.

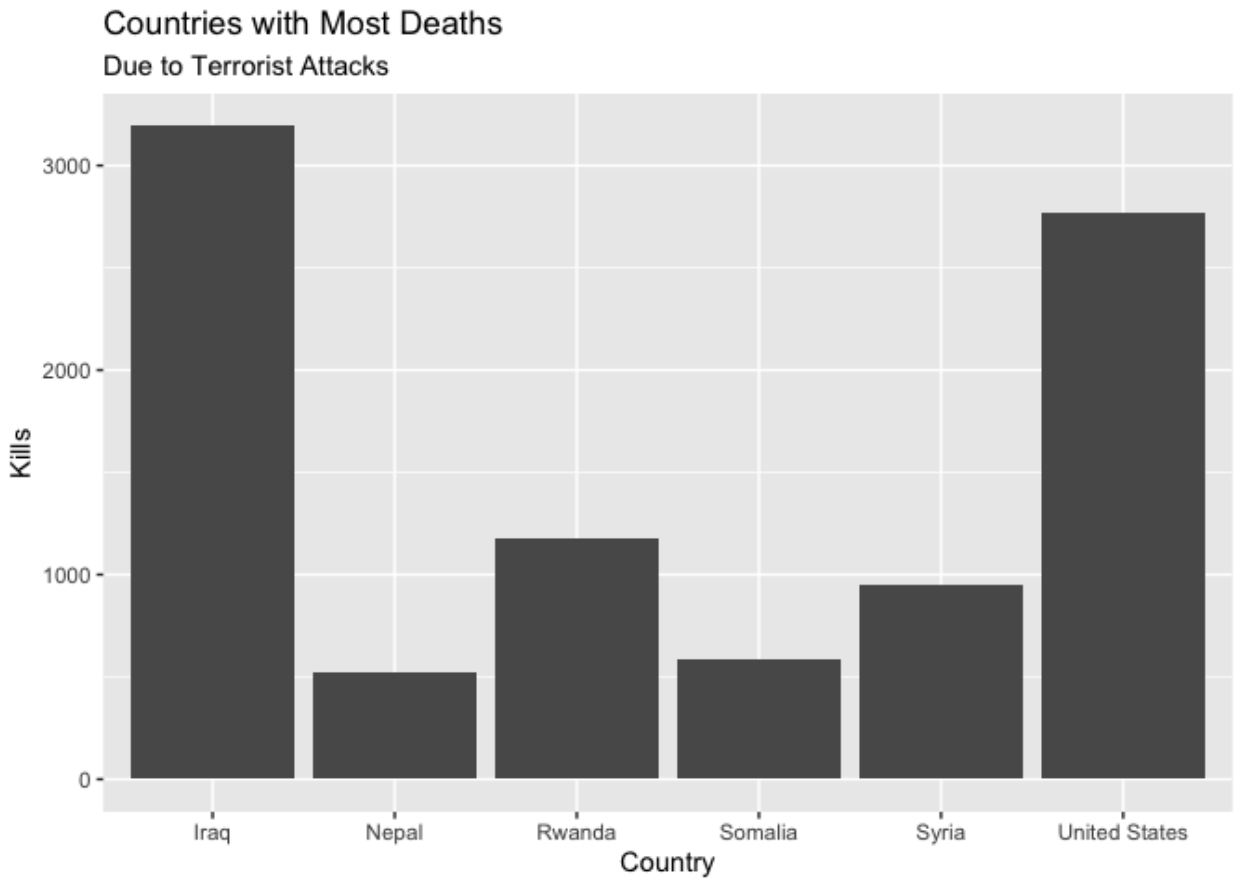


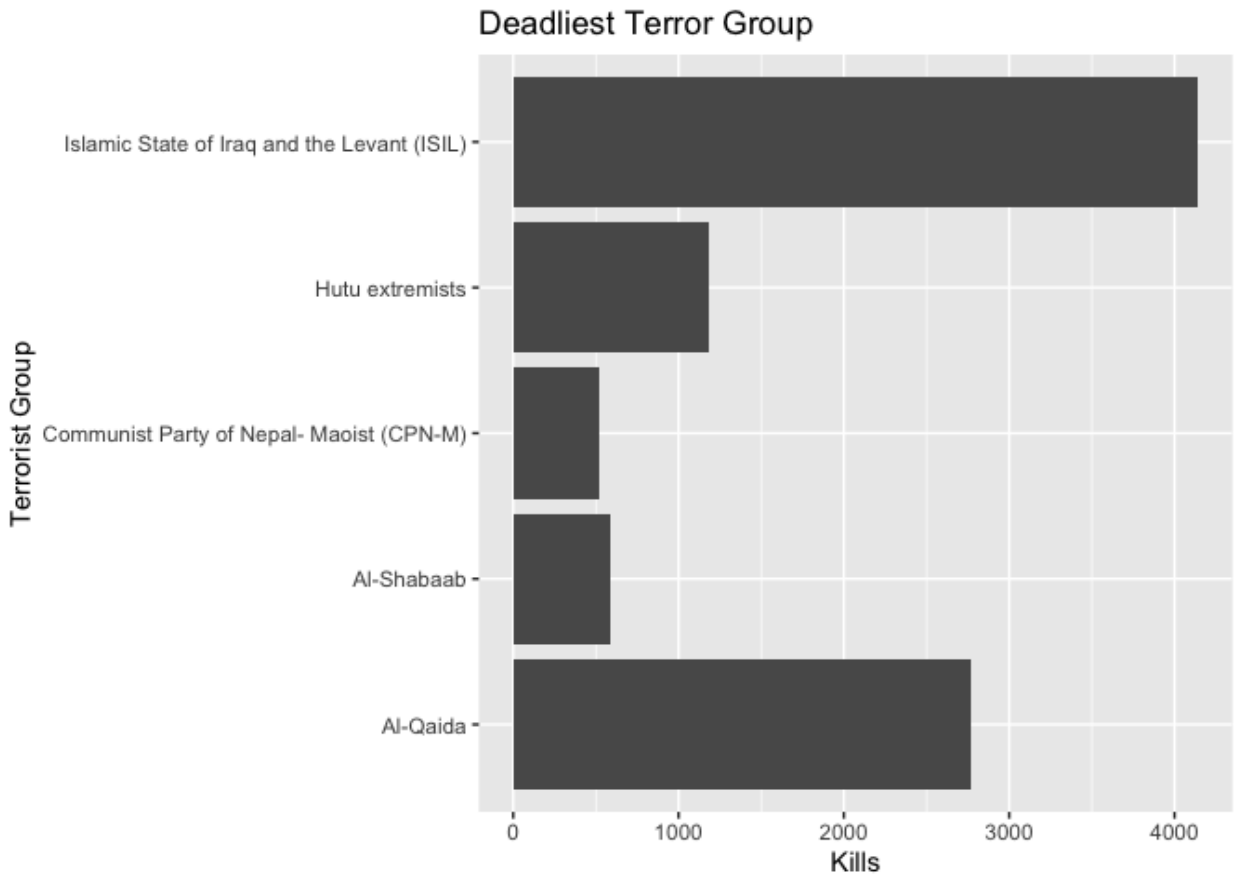
Along with the climb in attacks, unfortunately came with the increase in deaths over the last 10 years.



Digging deeper into analysis

If we look closer at where these attacks are taking place. We can see that Iraq, Syria, and the United States take claim for where these are taking place.


Countries with Most Deaths
Due to Terrorist Attacks
Kills
3000
2000
1000
0
Iraq
Nepal
Rwanda
Somalia
Syria
United States
Country



The terrorist group that has been responsible for the most deaths around the globe is ISIL. Al-Qaida is the group with the second most.

```
state_data <- read_csv("state.csv")
```

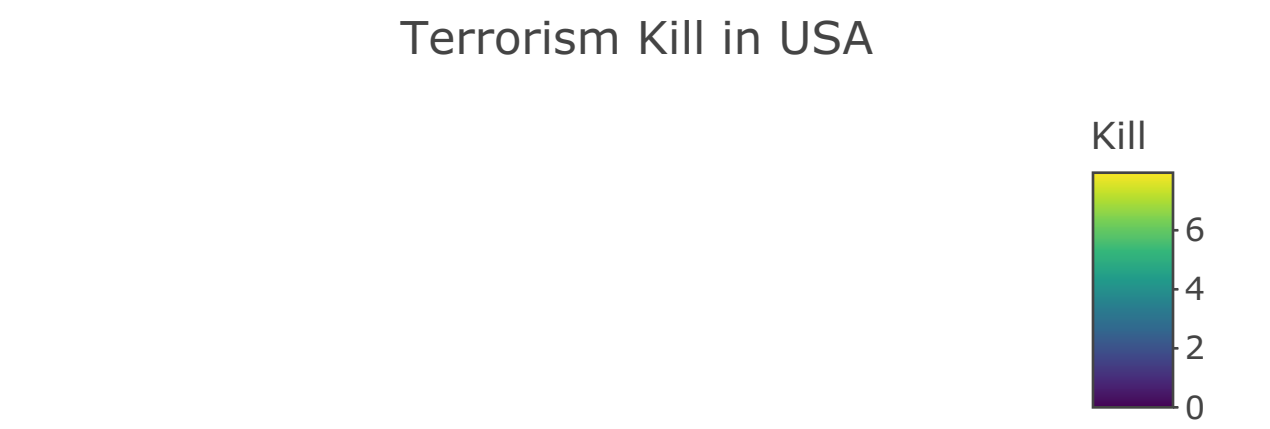
```
## Rows: 52 Columns: 5
```

```
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr (3): state, state_name, geo_id
## dbl (2): population, pop_density
```

```
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
usa <- left_join(terrorism[terrorism$Country=="United States",], state_data, by=c("State"="state_name"))
usa$Kill[is.na(usa$Kill)] = 0
usa_kill <-
  usa %>%
  group_by(state) %>%
  summarise(Kill = log(sum(Kill) + 1))
p3 <- plot_geo(usa_kill) %>%
  add_trace(
```

```
    z = ~Kill, span=I(0),
    locations = ~state, locationmode="USA-states")  %>%
  layout(geo=list(
                  scope = 'usa',
                  projection = list(type = 'albers usa'),
                  lakecolor = toRGB('white')
                 ),
         title='Terrorism Kill in USA'
        )
p3
```



Conclusion Based on the preliminary results above, we could reach the following conclusion:

In the last 10 years, there is a climb in terrorist attacks and killings. Most used attack type is bombing/explosion and private citizens and property is the most targeted group.

Iraq is suffering from the terrorism most and ISIL is responsible for the the most deaths around the globe.