

# **FIVE DESIGN SHEET**

**for Data Visualization and Exploration project  
(FIT5147), Semester 2**

**Tutotrial No. 6**

**Title: Weapons and Targets for Iraq Attacks: An Analysis**

**AIM:** To analyze the weapons used and targets for the Iraq attacks with respect to its cities facing attacks for the years 2015 to 2019.

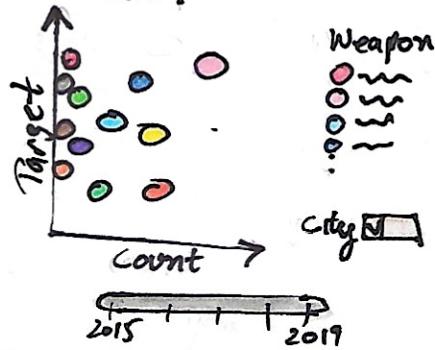
**Motivation:** Terrorism poses a direct threat to the security of the citizens of the nation and knows no-border, nationality, or religion. It hampers with the stability and prosperity of the individuals. With headlines flooded with attacks all over the world since years now, it is surprising to see the lack of analytical attention given to it and I would like to carry out a systematic analysis and a detailed research on various factors effected in an attack.

**Submitted by: Nishtha Arora (32296622)**

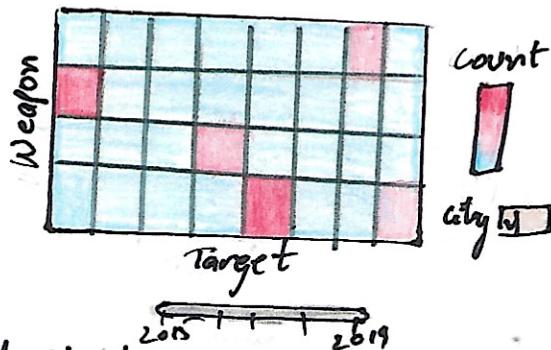
**Submitted to: The Faculty of Information Technology**

# IDEAS

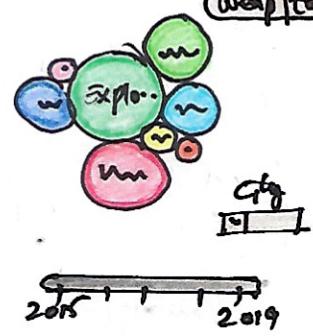
## ① Scatterplot



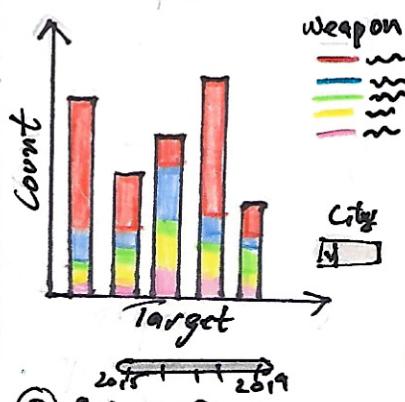
## ② Heatmap



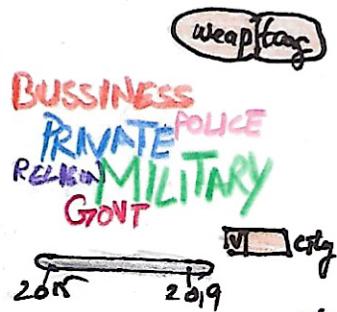
## ③ Circle Packing Chart



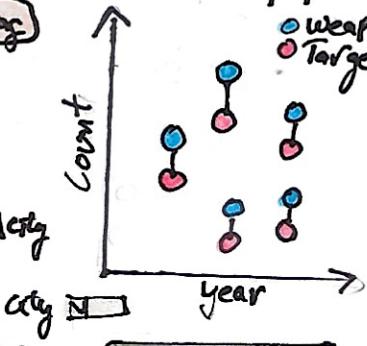
## ④ Bar Plot



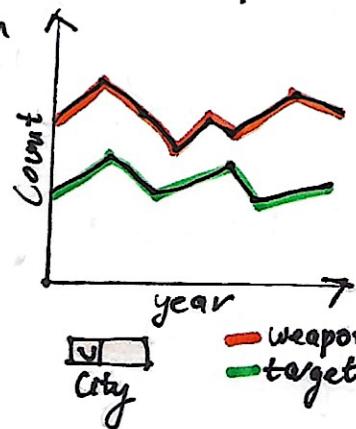
## ⑤ Word Cloud



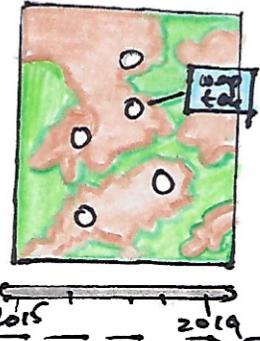
## ⑥ Lollipop



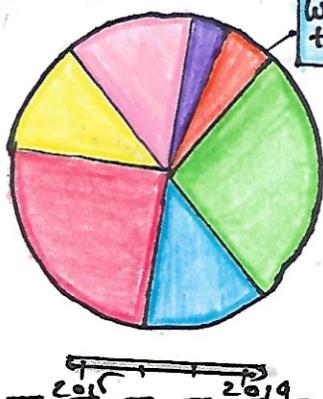
## ⑦ Line plot



## ⑧ BM MAP



## ⑨ Pie chart



# FIGURE

⑦ Not convenient as weapon names and target names won't be specified. [line plot]

## ⑨ Pie chart.

This chart is not the best way to display count of weapons and targets since it is difficult to read the proportion when there are more than types.

# CATEGORIZE

①, ④ | ②, ③ | ⑤ | ⑥ | ⑧

# COMBINE AND REFINER

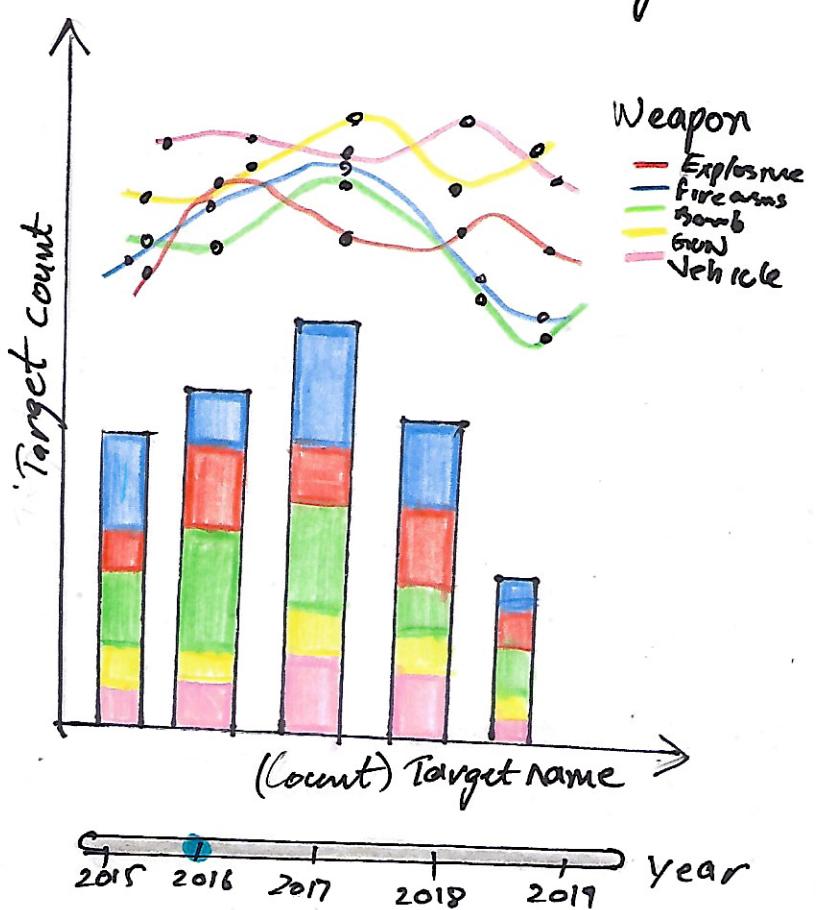
④ & ⑦ can be combined for a detailed visualization.

⑤ and ③ are similar kinds and can be combined to form just 1 plot.

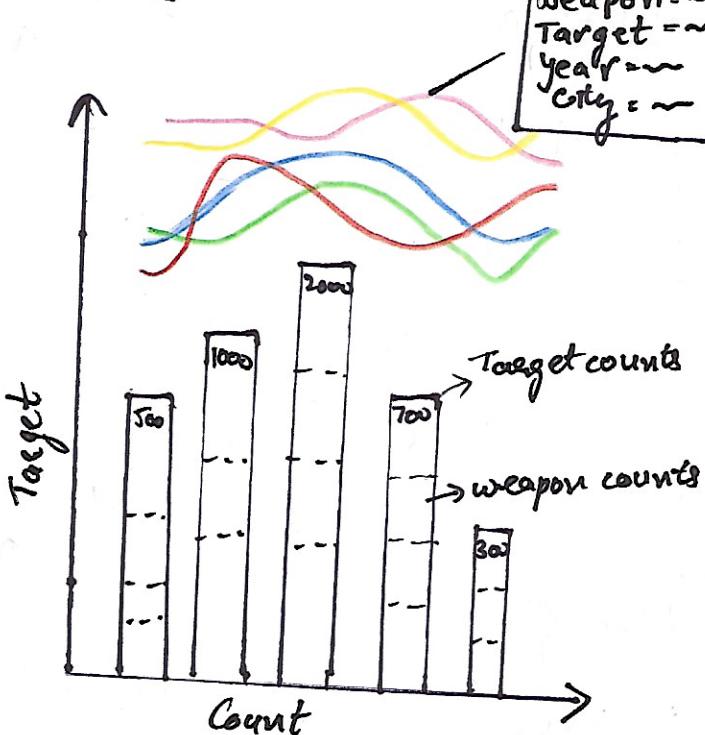
# QUESTIONS

1. Can users filter data to city specific?
2. Can users change display for specific year?
3. Is relationship b/w weapons & targets visible?

# Layout



# Focus



The bar plot combined with line shows 4 values i.e. weapon name, target type, city name and year. These are displayed on a tooltip when hovered or selected over the lines.

# INFO

Title: Weapons & Targets for Iraq Attacks : An Analysis

Author: Nishtha Arora

Date: 10.10.2021

Sheet: 2

Task: To compare weapon and target for Iraq cities.

# OPERATIONS

- Use the slider to adjust year for the plot of the year.
- Use the city dropdown to select cities of Iraq.
- Hovering on the lines will give (display) weapon type, target kind, year of attack and city of attack.
- Weapon names are displayed for each target type for each year and each city.

# DISCUSSION

## Positive:

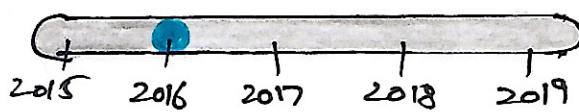
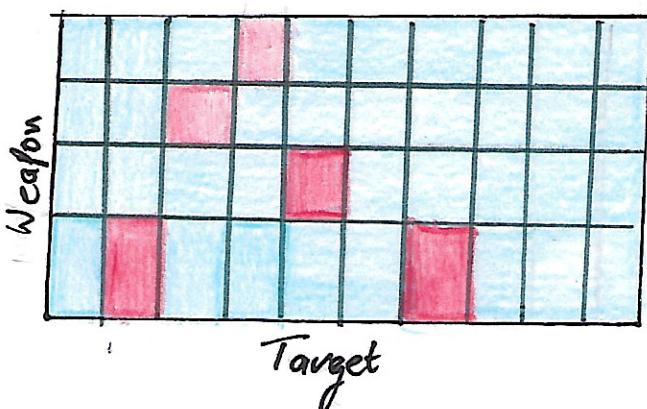
- Shows clear count for weapon and target.
- Hovering or selecting line graph shows detailed information.
- Comparison b/w weapons and targets can be easily displayed.

## Negative:

- Exact count for specific weapons needs to be calculated and is not seen directly.
- Target counts with respect to weapon is not viewed.
- The graph is not aesthetically viewable.

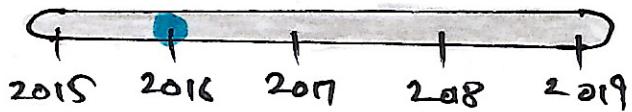
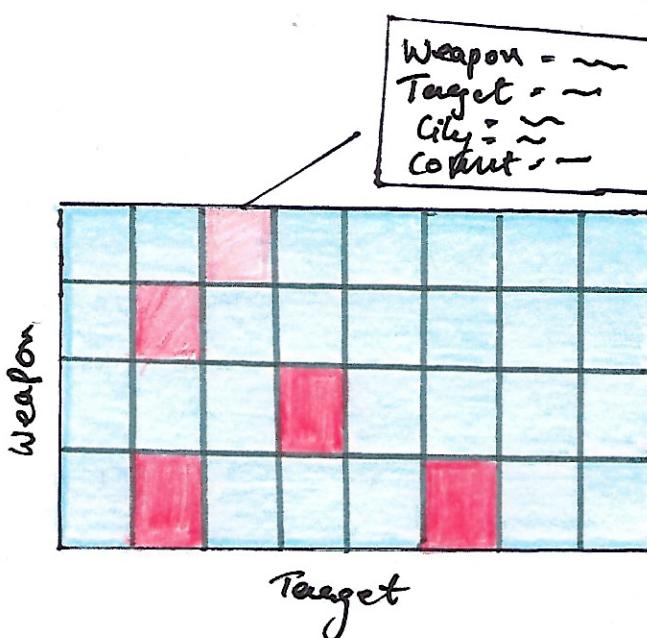
# Layout

City  All



# Focus

City



The boxes are coloured on the basis of count i.e. more no. of specific weapons used for specific targets in Iraq from 2015-2019.

# INFO

Title: Weapons and Targets for Iraq attacks: An Analysis

Author: Nishtha Arora

Date: 10.10.2021

Sheet: 3

Task: To compare weapon name and target type for cities of Iraq.

# OPERATIONS

- The plot can be adjusted for every year by using the slider.
- Plots for specific cities can be seen by using drop down.

- Hovering or selecting over the plot displays a tooltip mentioning weapon name, target name, city and count of targets for specific weapon type.

# DISCUSSION

## Positive:

- A proper comparison is seen for specific target kind with weapon type.
- plots can be displayed for specific cities of Iraq.
- A good way to display count for weapons and targets.

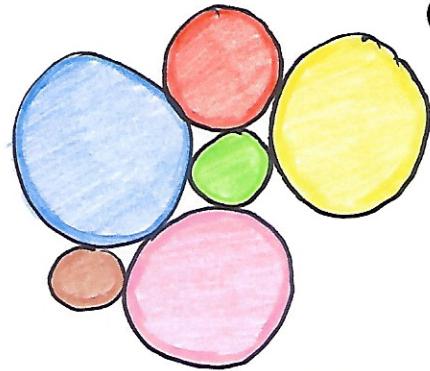
## Negative:

- Does not give individual counts for weapons and targets.
- Little difficult to read plot.

# Layout

All City

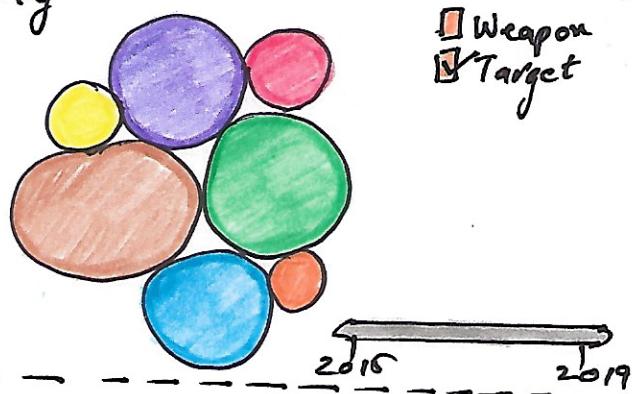
Weapon Target



All City

2015 2019

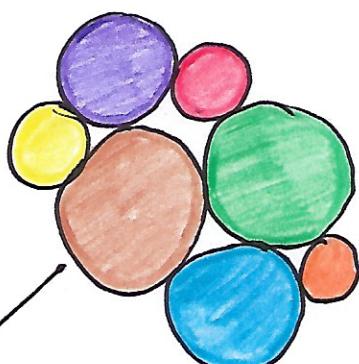
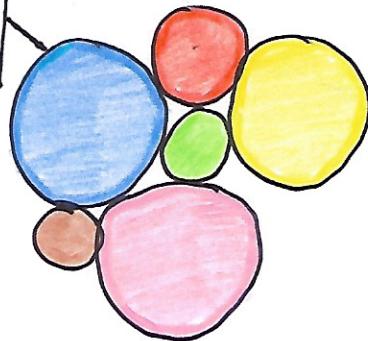
Weapon Target



## Focus

Weapon = ~  
City = ~  
Count = ~  
Year = ~

Weapon  
Target



# INFO

Title: Weapons and Targets for Iraq attacks: An Analysis

Author: Nishtha Arora

Date: 10.10.2021

Sheet: 2

TASK : Comparing weapon name with target types for cities of Iraq.

## OPERATIONS

- Use radio buttons to view plots of weapon and target names and count.
- City specific charts can be seen by using dropdown.
- Year specific graphs can be viewed by using slider.
- Hovering or selecting on the circles will give information of weapon/target, city, count, year.

## DISCUSSION

Positive:-

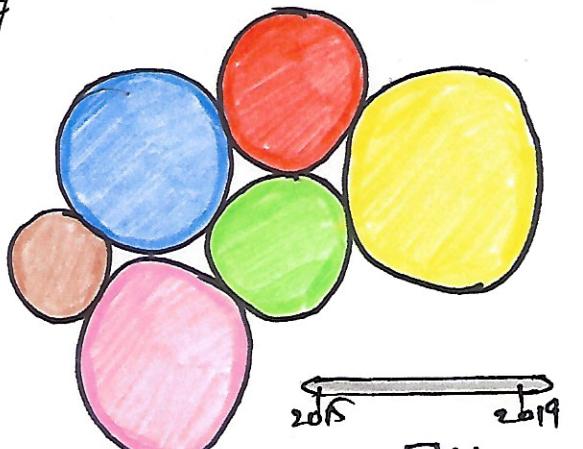
- The visualization is a good display of information and easy to read.
- The count for weapon and target is displayed clearly.
- Data can be filtered based on year

Negative:

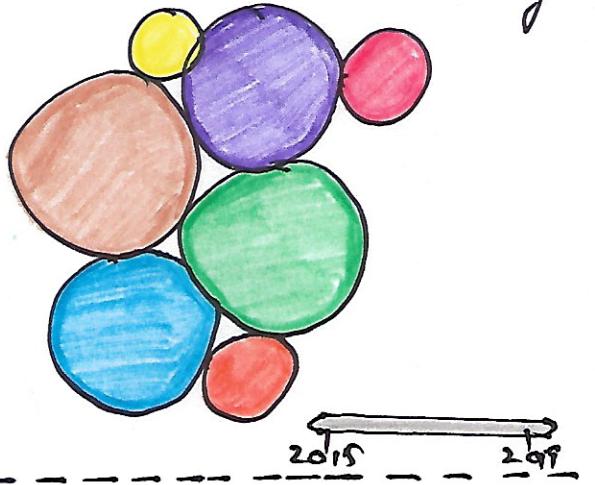
- Comparison b/w weapon and target count is not clearly possible.

# Layout

All City



All City



## Focus

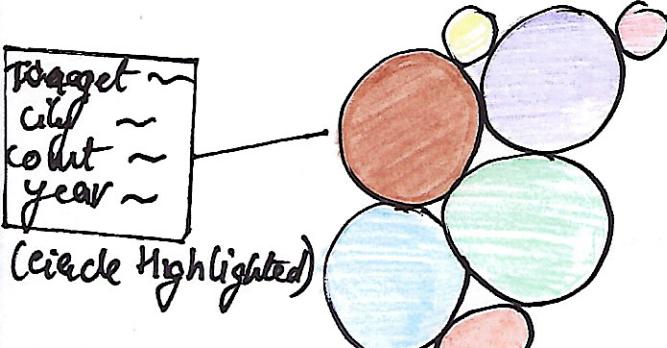
Weapon ~  
city ~  
Count ~  
year ~  
(circle highlighted)

Weapon  
 Target



Target ~  
city ~  
Count ~  
year ~

Weapon  
 Target



# INFO

Title: Weapons and Targets for Iraq attacks: An Analysis

Author: Nishtha Arora

Date: 10.10.2021

Sheet: 5

Task: Comparing weapons and targets for cities of Iraq.

## OPERATIONS

- Use radio buttons to view plots of weapon and target names.
- City specific charts can be seen using drop down.
- Year specific graphs can be seen using slider.
- Hovering or selecting circles, highlights the circle and displays weapon /target, city, count, year.

## DETAIL

### Dataset:

It is a dataset of weapon name, target types and city names for countries of the world. It is filtered for country Iraq and year 2015-2019.

**Dependencies:**  
shiny

### Estimate:

Cost: NIL

15/10/2021: Basic plot creation

16/10/2021: Alter with year

19/10/2021: Add city and radio button

20/10/2021: check interactions

25/10/2021: final dashboard setup