Visual Analytics
Preliminary Draft

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1 Dataset

We use *Global Terrorism Dataset*[1], that is composed by instances, each of them with an ID and 30 attributes such as:

- Event ID, primary key
- Date of the incident.
- Country, region, city of the incident.
- Extended: specifies if the duration of the attack is extended more than 24 hours.
- Suicide: is 'Yes' if the incident was a suicide attack. 'No' otherwise.
- The type of the attack.
- The type of the target or victim.
- Number of terrorists parteciping in the incident.
- Details about the group that carried out the attack.
- Type and details of weapon used in the incident.
- Number of the total lethal nad non-lethal fatalities fot the incident.

The dataset is composed of categorical (e.g Method Attack, Success, ...) and numerical (e.g. Terrorist, Fatalities, ...) attributes. The dataset has been filtered from entries that have missing attributes and the AS index for this dataset is about 50.0000. We have also already developed a python script to extract the information needed from the dataset, for example the 2-component PCA values.

[1] https://www.kaggle.com/START-UMD/gtd

2 Visualization and Analytics

We will create 7 views:

- A map where we rapresent the attacks in each country.
- A scatterplot where we represent the dataset using PCA. Using this view is possible to spot the spatial distribution of the terrorism attacks.
- A stack barchart represents frequency distribution of weapons of each region of the world.
- A parallel coordinates rappresents the whole dataset, one line for each terrorism attack.
- A table shows the 10 most deadliest attacks.
- Stacked Barcharts rappresenting type of the attack and type of the victmis.

In the beginning, the user will see the worldwide statistics organized by country and then it will be able to select a nation.

Each view will be coordinated: selecting a country in the map will show the terrorist attacks happened there together with the PCA scatterplot. If a specific attack is select, all the view will show the specific information, for example in the table will be rappresented the 10 most deadliest attacks of selected country.