GoT Plot

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App avalaible on **Shinyapps.io**

Introduction

This project is related to data visualization, cartography and shiny apps. Using the *Game Of Thrones* dataset given by the teacher, we implemented an application that provides maps and charts. We used the R's **Shiny** package to develop the web application.

In our application there are 4 sections, which show different analytics:

- **Presence Time**: we show in the map the presence of a character during the seasons.
- **Deaths**: we show in the map where and how much the characters killed.
- **Character Trips**: we show the displacements of the characters over the map.
- **Statistics**: last but not least we show some generics charts about killers and killed people, presence over the screen, scene duration and population of Westeros.

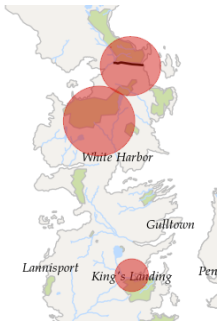
We will study each section in depth below.

Project

Presence Time

To draw this plot, first of all, from the original dataset we extrapolate the most important characters in order to avoid long and unuseful lists (*mostImportantCharacters*). Then, for every character we take screen time for every season (*timePerSeason*). Once we have our two datasets, we perform the operations based on user choices: we filter the dataset by the selected characters and seasons, then we group by the name and the location. After calculating all the information needed, we complete the plot using *ggplot* and *sf.*

Deaths



The second tab shows how much and where the characters killed. First of all, we calculate the characters who killed the most (*mostImportantKillers*). To obtain this list, we use another dataset (that can be found **here**) because we need more information about killers: who killed who, with what, where and when. In the same way as before, we perform the operations based on user choices, and we complete the plot using the usuals *ggplot* and *sf*.

Character Trips

The third tab shows the movements over the map by the characters. Again, as before, we consider only the most important characters and using the data about scene locations, we calculate their journeys (*movingPerSeason*). We use `sf::st_cast("LINESTRING")` to transform the result into a line and then we plot the same ways as before.

Statistic

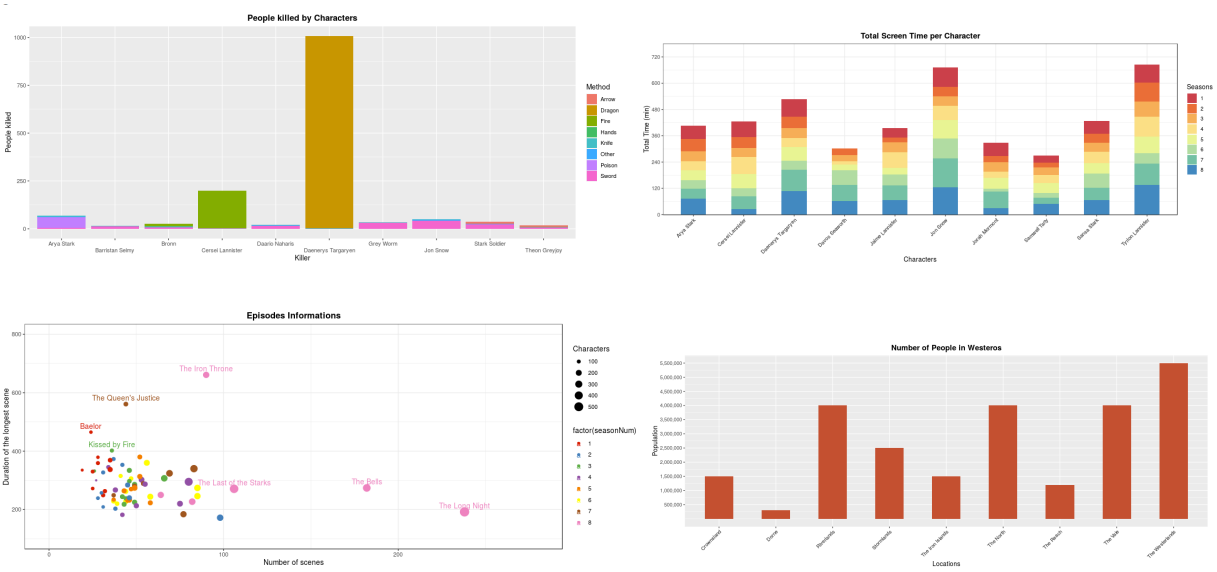
Lastly, in the fourth tab we can observe several general statistics:

1. The chart shows how much and how the principal killers killed: it's a barplot where we show the killer name on the x axis, how much people they killed in the y axis and with the color we visualized how they kill.

2. The chart shows the total screen time over the season: it's a barplot as well. With colors we indicate the season number.

3. The third chart shows information about the episodes. In particular you can find: the episodes with more scenes in the x axis, the length of the longest scene for each episode in the y axis, with points size we indicate the number of characters involved and with the color the episode's season.

4. The last chart shows the population of Westeros by location in a barplot.



Conclusions

For all the members of the project it was the first approach to R. It has been very interesting to discover how charts are made and how to visualize data in the best way possible. It was also challenging and interesting to use the Shiny package to make an interactive application instead of hard-coded charts.