Datavisualization final assignment - Team Data Manipulation

Marc Fuentes Bongenaar, s2258722
Elise Schut, s2402955
Rosalie van Elburg, s2398486
Konrad Rempe, s2321041
Jasper Kolnaar, s2157705
Vera Schockemöhle, s2397277

Them

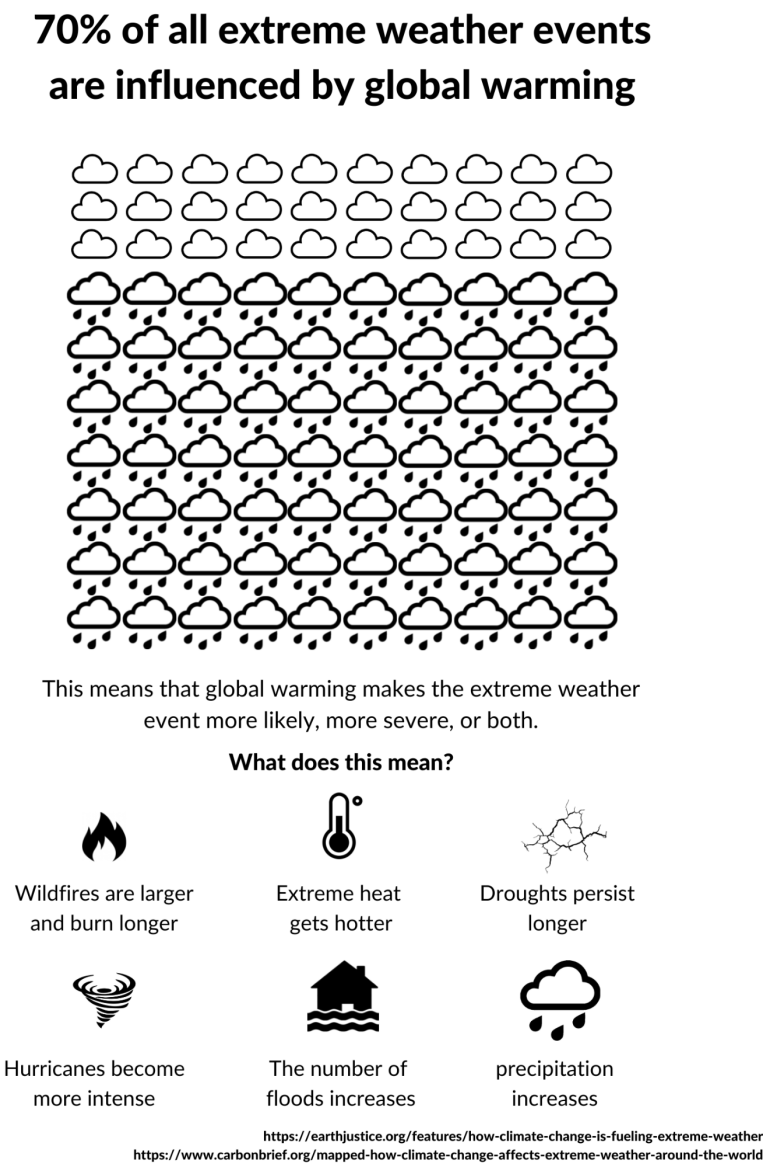
For the final assignment we chose to make our visualisations about misrepresenting data. This could be using visualisation styles in a malicious way, for example through axis scaling. It can also be filtering the dataset used in such a way that it represents what you want it to represent, instead of what it actually is about.

The visualisations in this document will be accompanied with a short text by the creator explaining what the topic is and how the data was manipulated.

Marc

https://www.sciencedaily.com/releases/2015/05/150520193831.htm

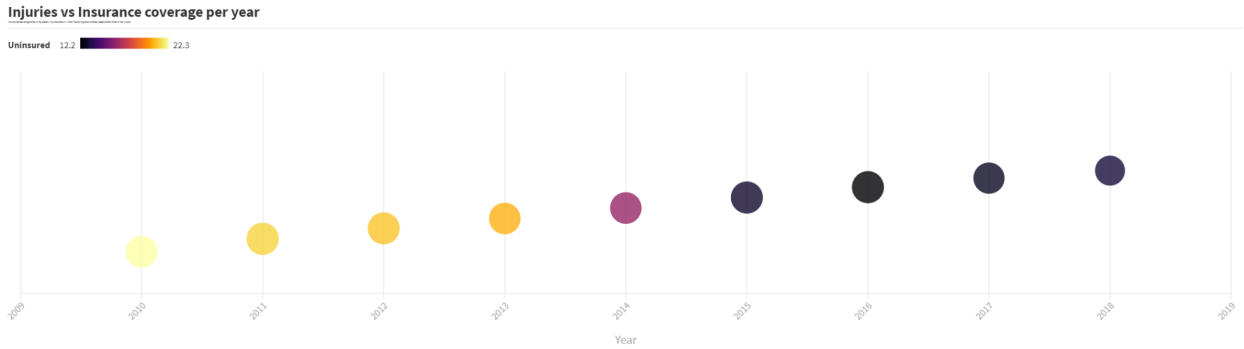
This visualisation shows the amount of heat related deaths and the amount of cold related deaths compared to each other. A study of 74 million deaths worldwide showed that you are 20 times more likely to die from cold related causes than from heat related causes. This fact could be used to push a message of increased global warming to combat the cold related deaths, neglecting all the repercussions global warming has.



https://earthjustice.org/features/how-climate-change-is-fueling-extreme-weather
https://www.carbonbrief.org/mapped-how-climate-change-affects-extreme-weather-around-the-world

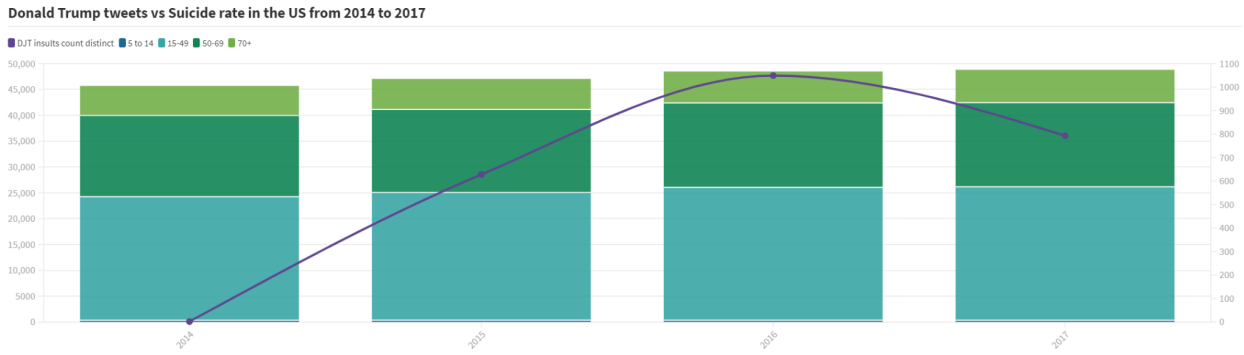
This visualisation shows a more accurate picture of global warming and its consequences. While global warming might combat cold in some areas in the world, the wider repercussions on the world would be immense. Some of the consequences can be seen below.

Konrad



https://www.kaggle.com/ayushggarg/all-trumps-twitter-insults-20152021

https://ourworldindata.org/suicide

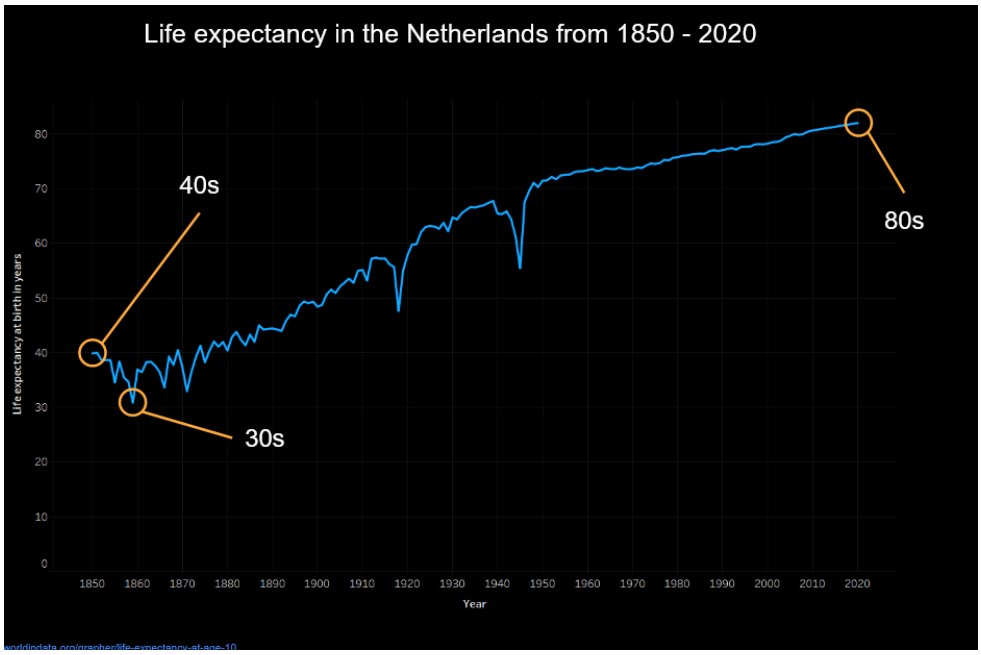


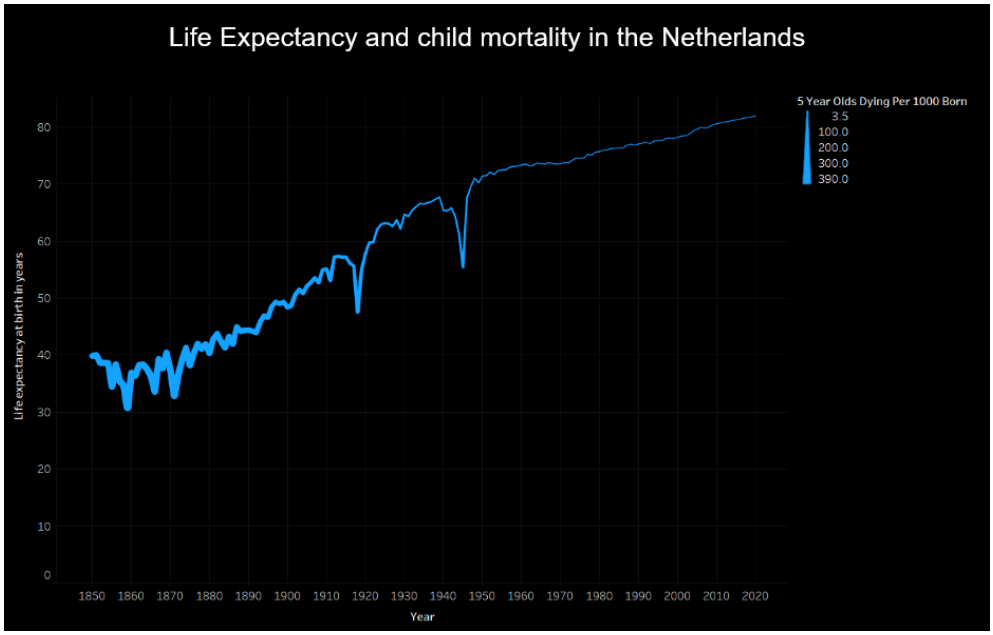
https://www.cdc.gov/nchs/fastats/health-expenditures.htm

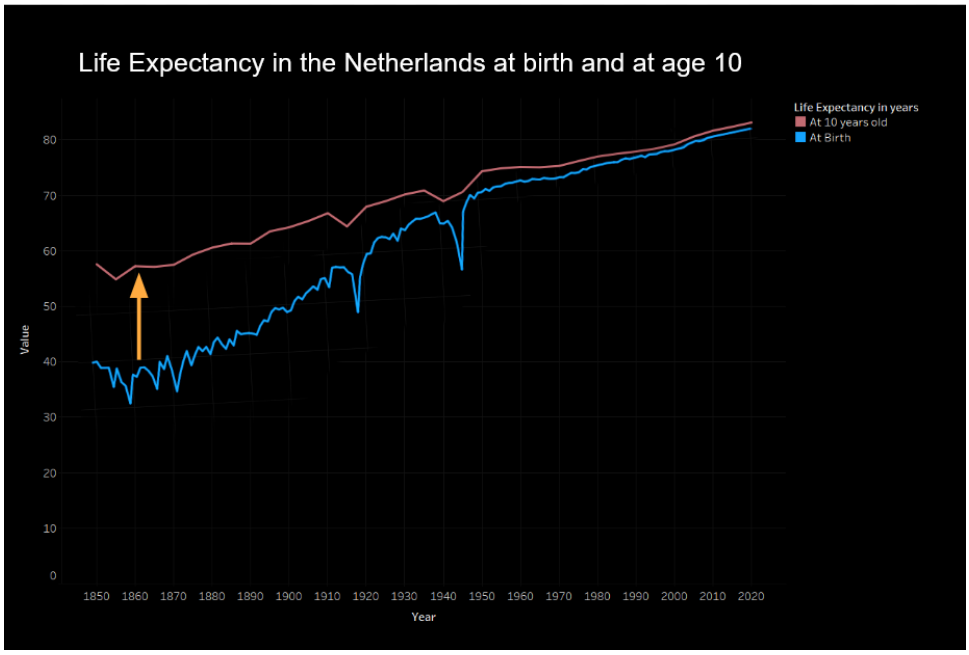
https://webappa.cdc.gov/cgi-bin/broker.exe
https://webappa.cdc.gov/sasweb/ncipc/nfirates.html

Settings:
Intent of Injury: unintentional
Cause of Injury: Fall
Year(s) of Report: 2009 to 2019
Sort by category: 1. Year 2.None 3.None 4.None

Jasper
Showing how averages can mislead through the life expectancy at birth in The Netherlands from 1850 until 2020.



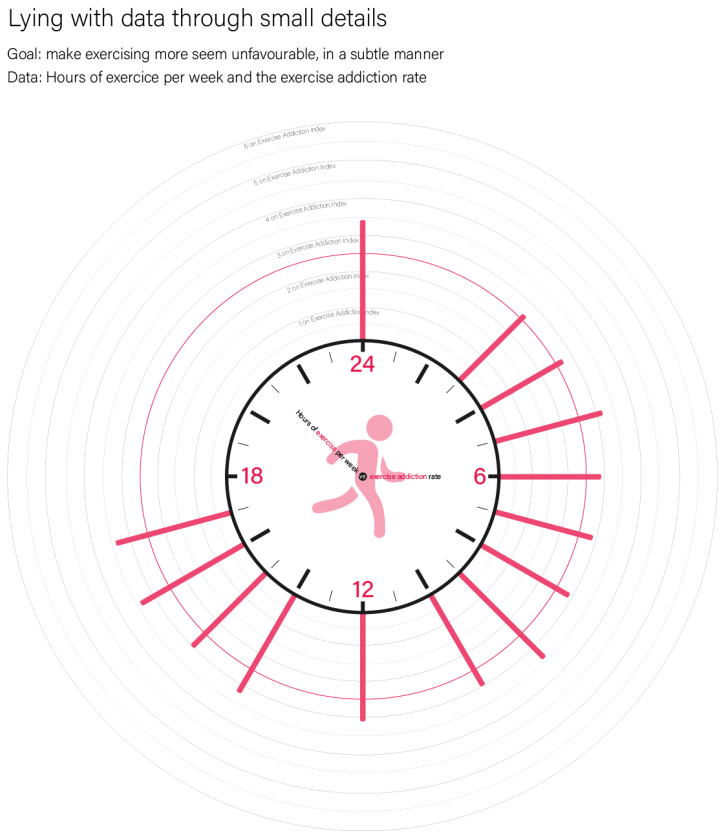




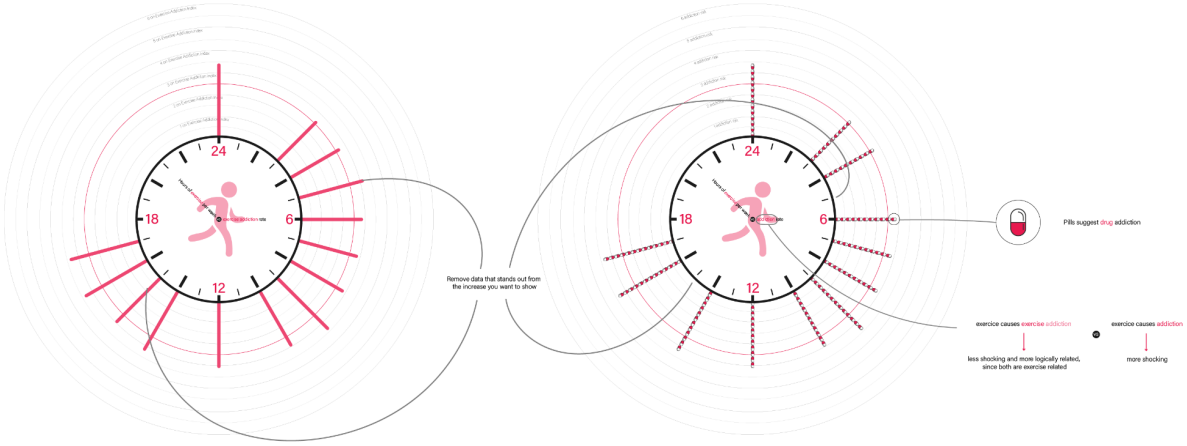
Sources:
child mortality - http://gapm.io/du5mr
life expectancy at age 10 - https://ourworldindata.org/grapher/life-expectancy-at-age-10
life expectancy at birth- https://www.gapminder.org/documentation/documentation/gapdata004%20v7.xlsx

Elise - Making more exercise seem unfavourable

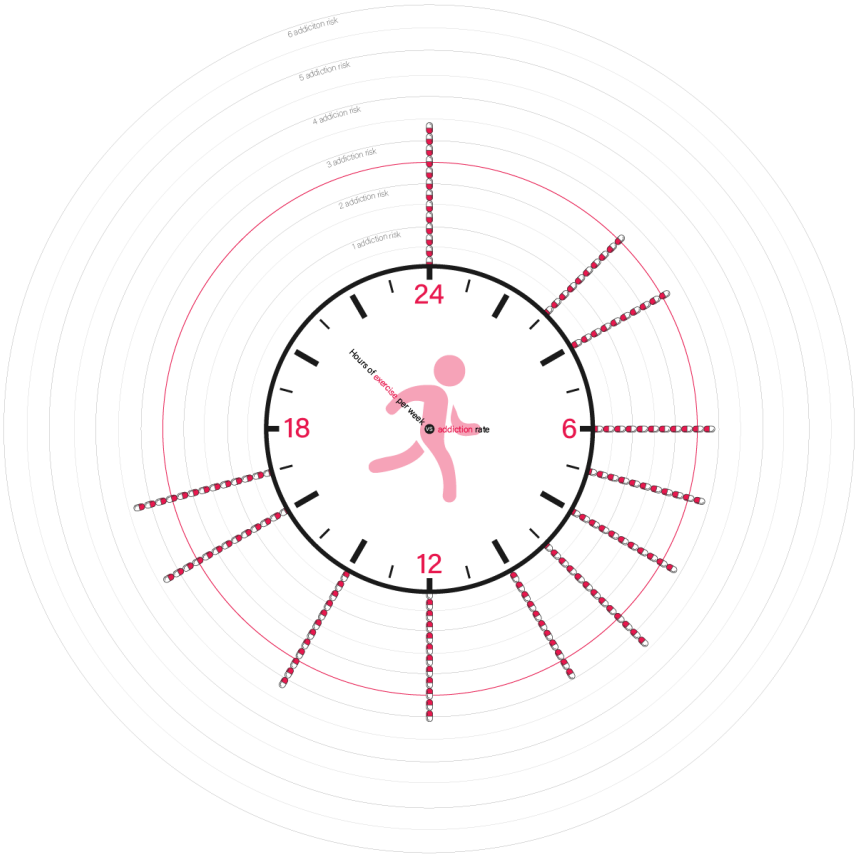
For viewing the visualisations in proper quality view the files in a shared folder through this link:
https://drive.google.com/drive/folders/1z1LGFanh5fPqJsYcMWcKTe3mhLmN2PzY?usp=sharing



Visualisation 1



Visualisation 2

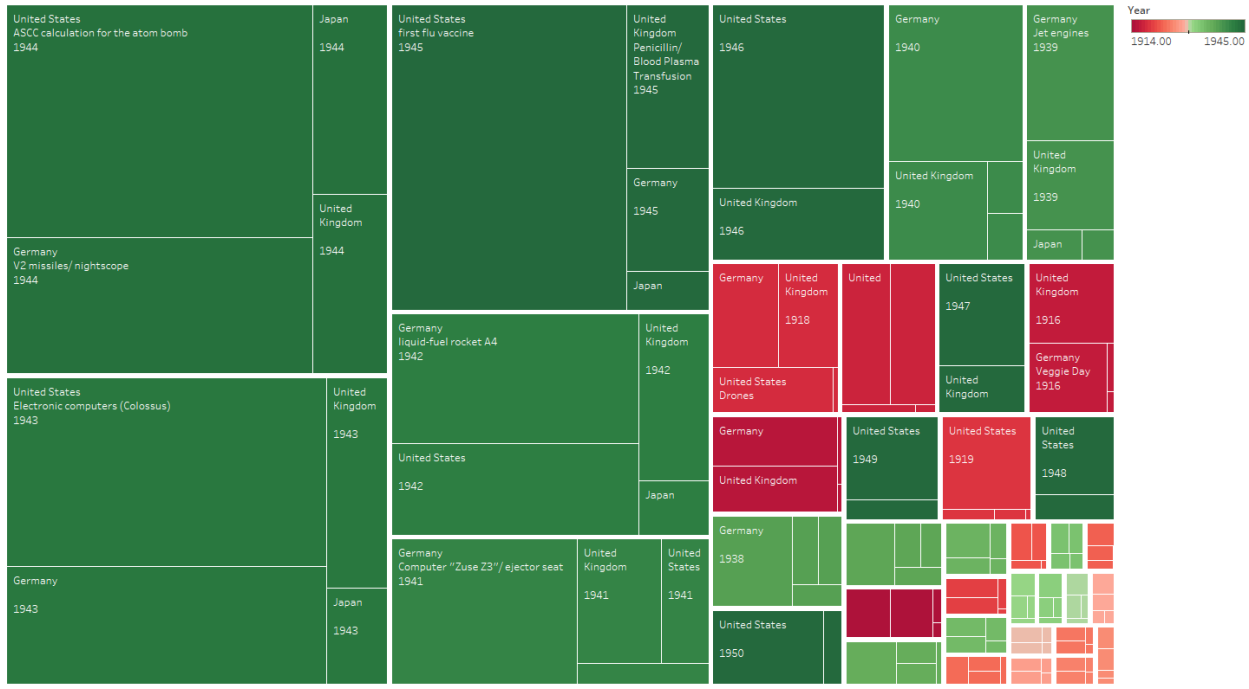


Visualisation 3

Sources:
Exercise Addiction in Aerobic and Anaerobic Exercisers -
https://data.mendeley.com/datasets/tj2gnv2ygy/1
The Exercise Addiction Inventory: A New Brief Screening Tool -
https://www.researchgate.net/publication/233809435_The_Exercise_Addiction_Inventory_A_New_Brief_Screening_Tool

Vera

Military expenditure per country per year and inventions



Entity, Inventions and Year. Color shows details about Year. Size shows sum of Military expenditure (1914-2007, real prices) (Correlates of War: National Material Capabilities (v4.0)). The marks are labeled by Entity, Inventions and Year. The data is filtered on average of Military expenditure (1914-2007, real prices) (Correlates of War: National Material Capabilities (v4.0)), which ranges from 235,033,615.3 to 716,000,000,000. The view is filtered on Year and Entity. The Year filter ranges from 1914 to 1950. The Entity filter keeps Germany, Japan, United Kingdom and United States.

Sources:

Military expenditure by country

https://ourworldindata.org/military-spending

Inventions:

https://www.mentalfloss.com/article/31882/12-technological-advancements-world-war-i

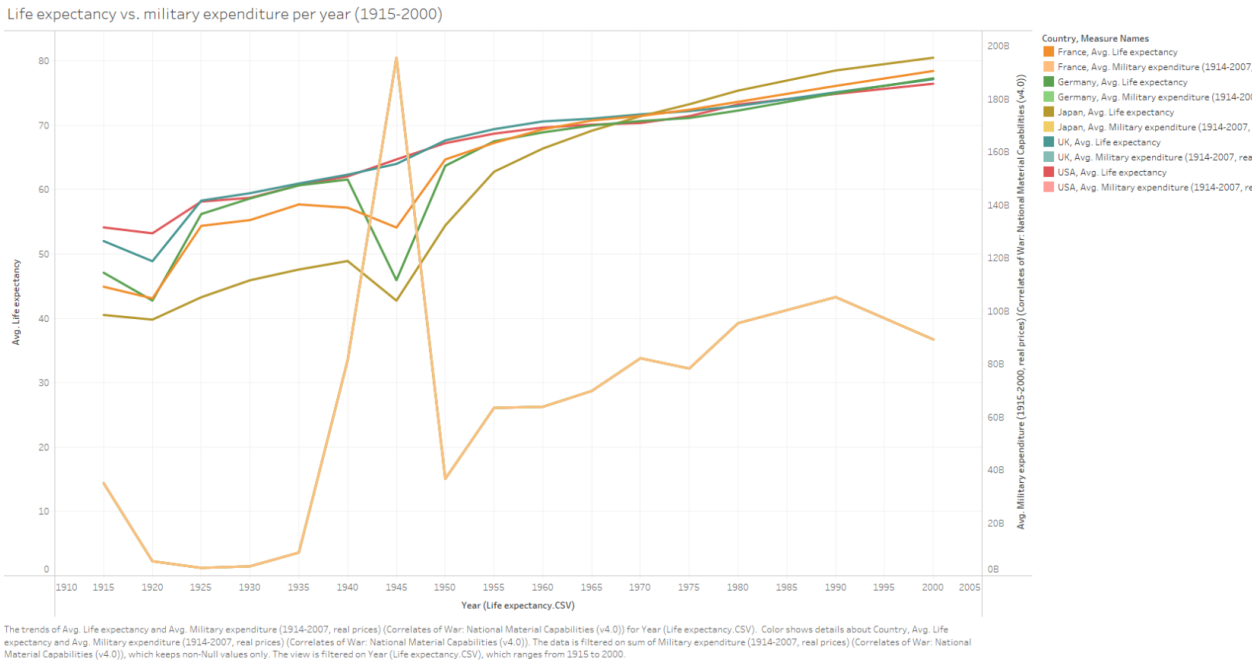
https://www.goruma.de/laender/amerika/usa/persoenlichkeiten/usa-erfinder

https://interestingengineering.com/7-technological-innovations-that-came-out-of-world-war-ii

https://www.sueddeutsche.de/politik/innovationen-im-ersten-weltkrieg-erfindungen-die-das-leben-erleichtern-1.1956058

https://blog.hnf.de/der-erste-amerikanische-computer/#:~:text=Der%20ASCC%20machte%20sich%20schon,Aufgaben%20aus%20der%20Waffentechnik%20vorgelegt.

http://niwki.rcre.opolskie.pl/k/images/Scenariusze_wlasna_historia_i_kultura/Materialy_dodatkowe/Deutsche_Erfindungen_-_Kartenspiel.pdf

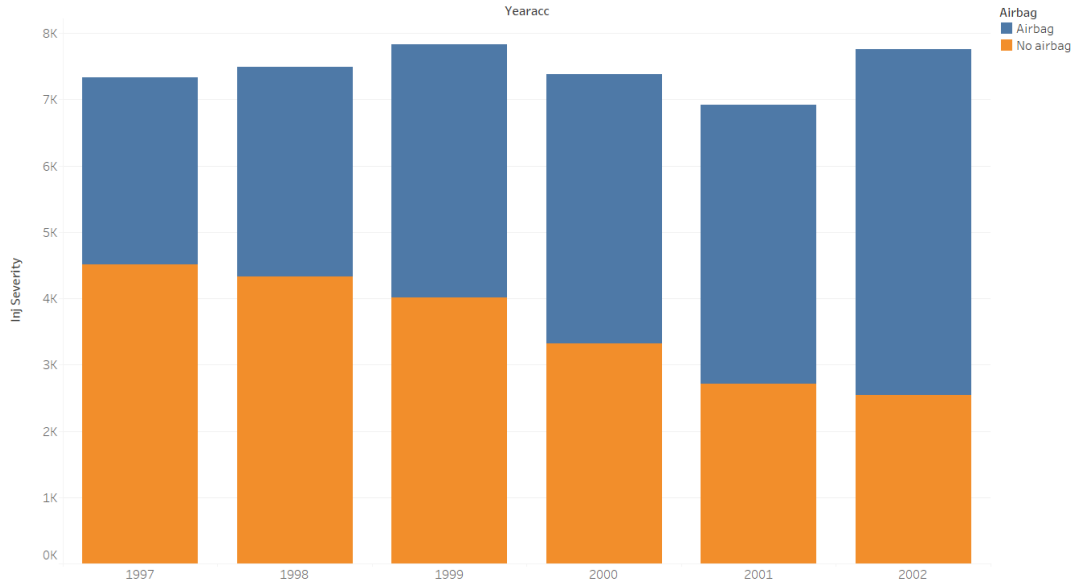


Sources:
Military expenditure by country
https://ourworldindata.org/military-spending

Life expectancy (from birth) from different countries, from 1875 to 2020
https://www-statista-com.ezproxy2.utwente.nl/statistics/1041098/life-expectancy-germany-all-time/
https://www-statista-com.ezproxy2.utwente.nl/statistics/1040079/life-expectancy-united-states-all-time/
https://www-statista-com.ezproxy2.utwente.nl/statistics/1040159/life-expectancy-united-kingdom-all-time/
https://www-statista-com.ezproxy2.utwente.nl/statistics/1041369/life-expectancy-japan-all-time/

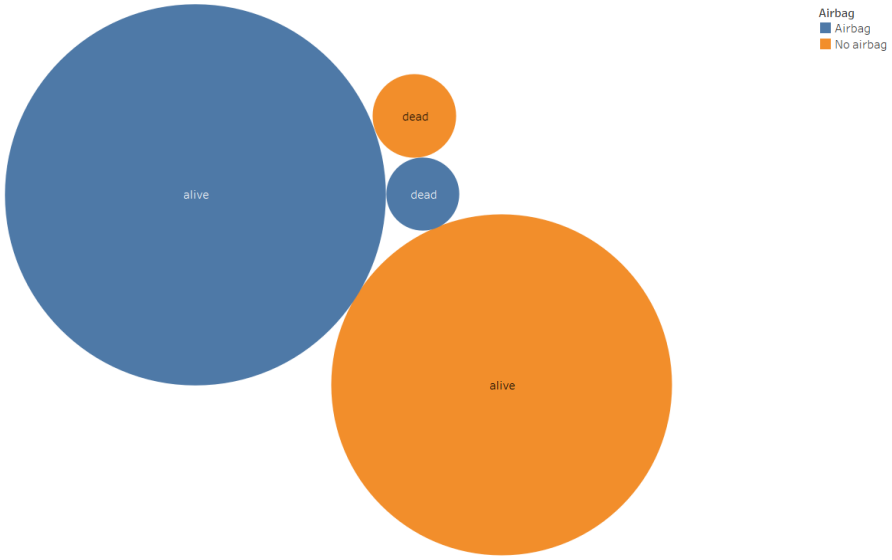
Rosalie

Injury severity with and without an airbag from 1997 to 2002



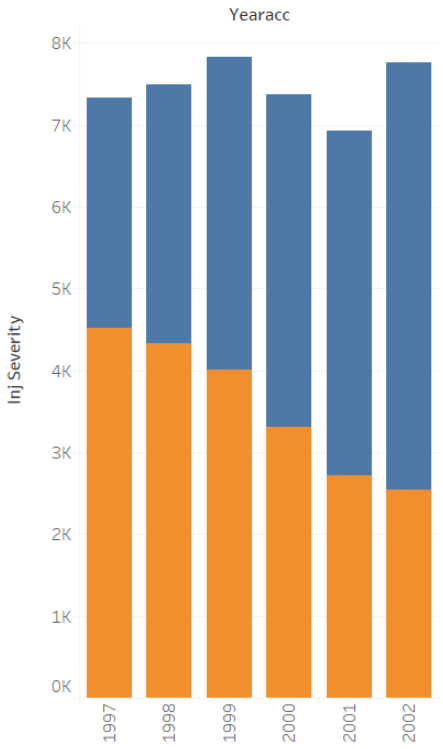
Sum of Inj Severity for each Yearacc Year. Color shows details about Airbag.

Amount of people that are alive/dead after a car crash with airbag vs without an airbag

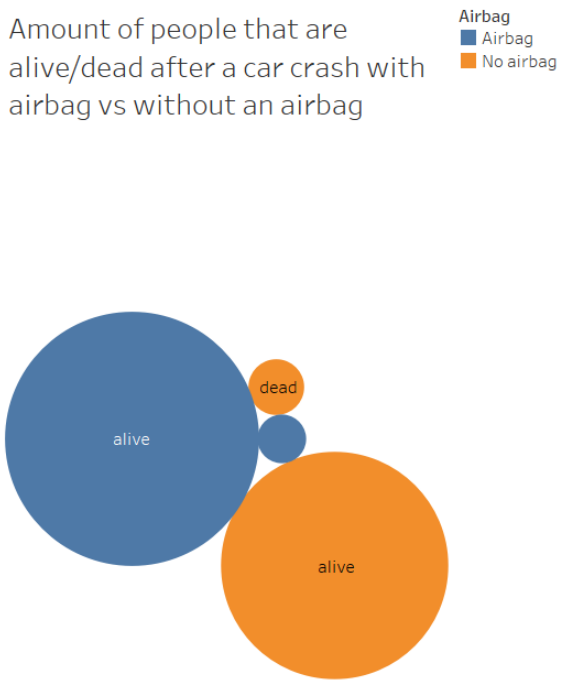


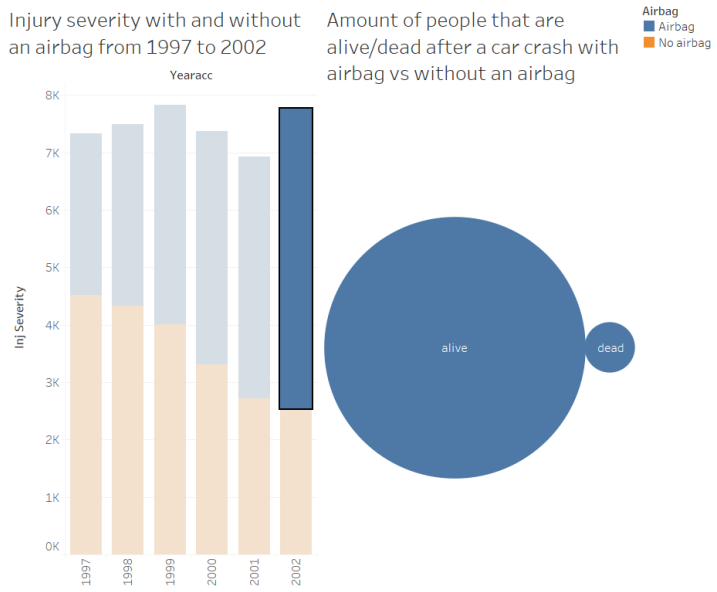
Dead. Color shows details about Airbag. Size shows count of Dead. The marks are labeled by Dead. The data is filtered on Action (Airbag,YEAR(Yearacc)), which keeps 12 members.

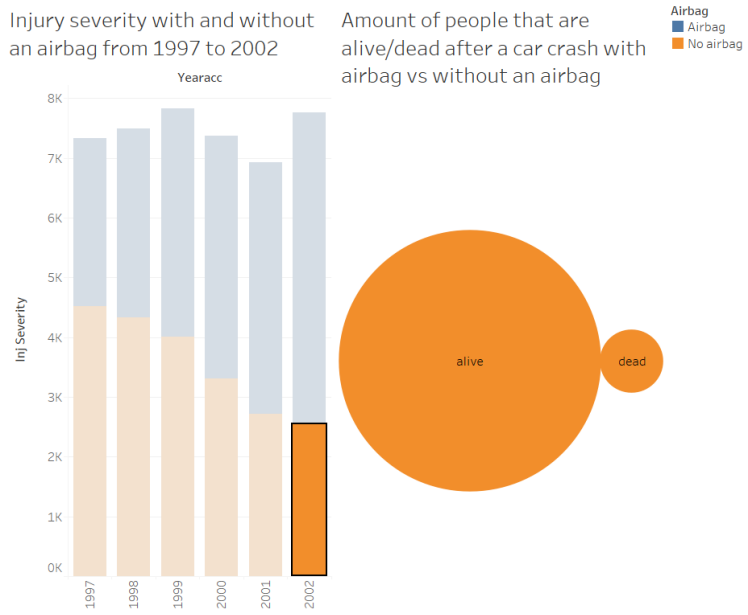
Injury severity with and without an airbag from 1997 to 2002



Amount of people that are alive/dead after a car crash with airbag vs without an airbag







Sources:

Airbag and other factors on Accident Fatalities - https://www.kaggle.com/loveall/airbag-and-other-factors-on-accident-fatalities