Shark Attack

Data Cleaning Project

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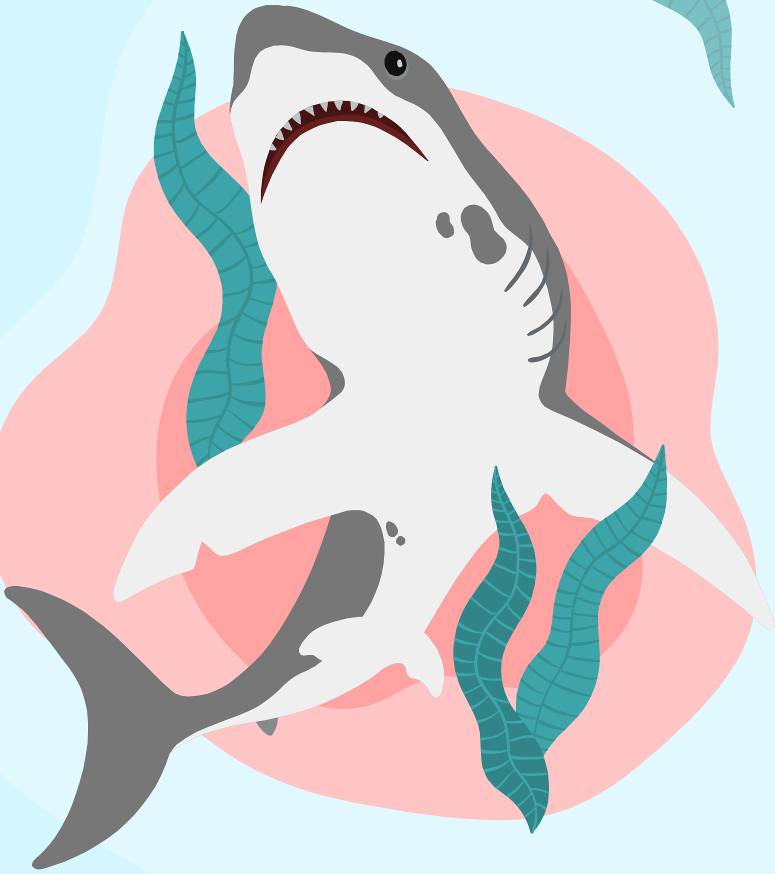
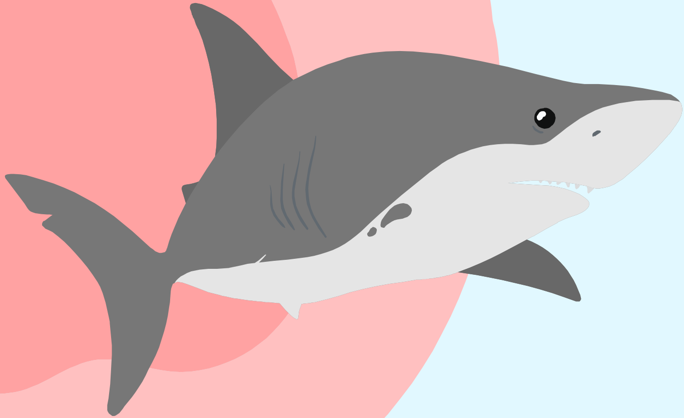




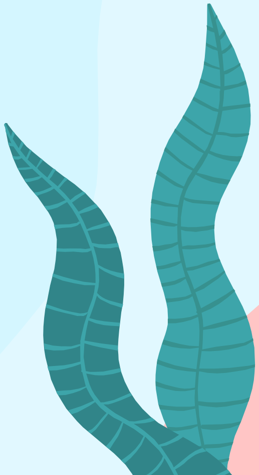
Goal and Description

This project aimed at ***cleaning the "Global Shark Attacks"*** dataset in order to **analyse the fatality incidence in the records and the profile of these fatal attacks** considering 'sex', 'age', 'country' and 'year' information provided.

Steps

1. The original dataset was made of **25723 lines and 24 columns**.

   After cleaning lines with over 22 null values in them, it was left with **6302 lines** for the analysis.



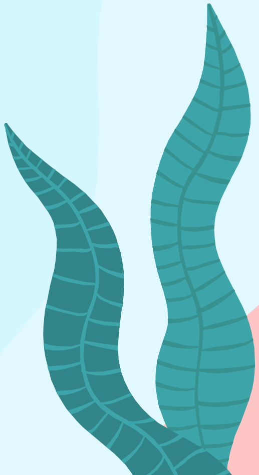
Steps

2. The 'fatal', 'sex' and 'age' **columns were cleaned**.

Unwanted categories and specific errors that represented less than 1% of data were turned into nulls or replaced by a small correction.

2.1 The **‘fatal'** column was left with **'y', 'n'** and null values.

2.2 The **'sex'** column was left with **'m', 'f'** and null values.



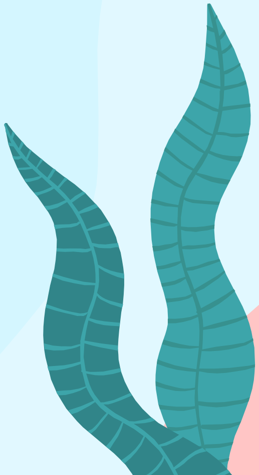
Steps

2.3 The **'age'** columns was left with **float and null values**.

If there were uncertain age values for a single person, the average of the values was used. If the record contained ages for more than a victim, each age turned into a different line and information from other columns were duplicated.

The dataset ended up with 6332 lines.

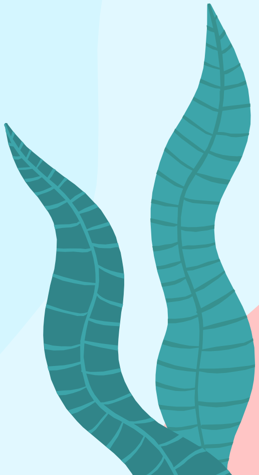
2.4 The **'age_groups' column was created** to classify ages in the following intervals: 0-9, 10-19, 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80-87.



Steps

3. **Data frames were created** to analyse the total values and percentages of categories for these columns: 'fatal', 'sex', 'age_groups', 'fatal X sex', 'fatal X age_groups'.

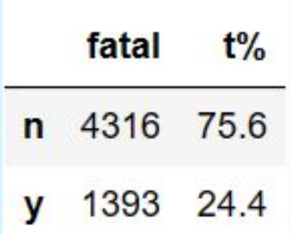
4. The **'country' and the 'year' columns** were grouped by the 'fatal' colum and the frequency of their values.



Analysis

From the lines of 6332 records:

Most attacks are not fatal
(**75.6%** from 90.16% not nulls)

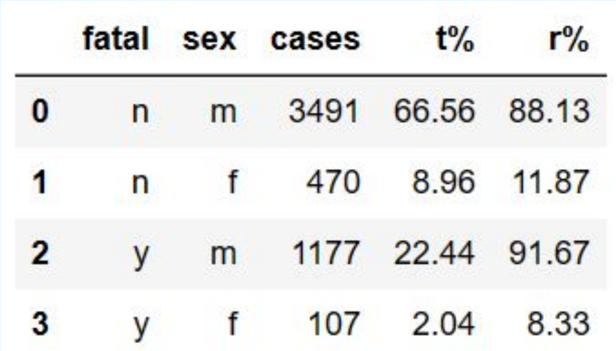


	fatal	t%
n	4316	75.6
y	1393	24.4

Analysis

From the lines of 6332 records:

Most fatal cases happen among males
(**22.44%** from 82,83% not nulls)



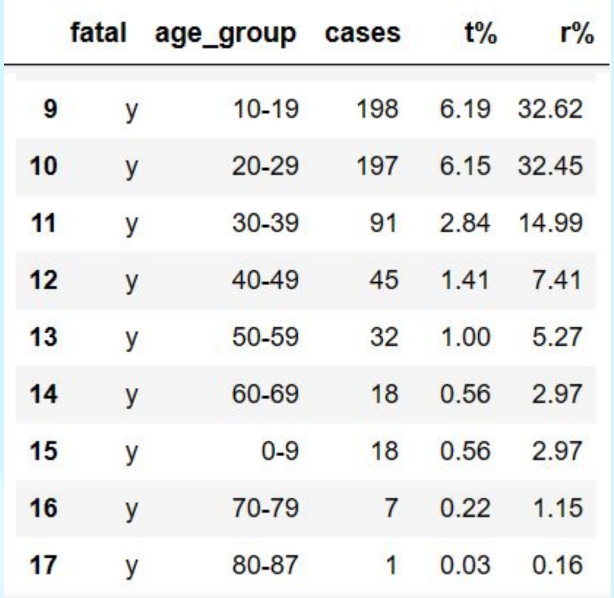
	fatal	sex	cases	t%	r%
0	n	m	3491	66.56	88.13
1	n	f	470	8.96	11.87
2	y	m	1177	22.44	91.67
3	y	f	107	2.04	8.33

Analysis

From the lines of 6332 records:

Most fatal cases happen between ages 10-29

(**over 65%** from 50,55% not nulls)

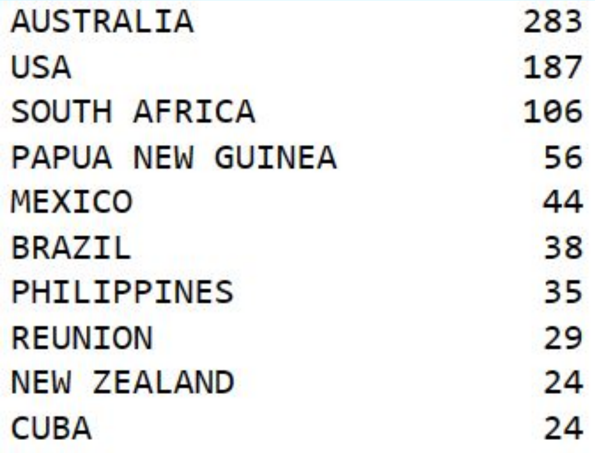


	fatal	age_group	cases	t%	r%
9	y	10-19	198	6.19	32.62
10	y	20-29	197	6.15	32.45
11	y	30-39	91	2.84	14.99
12	y	40-49	45	1.41	7.41
13	y	50-59	32	1.00	5.27
14	y	60-69	18	0.56	2.97
15	y	0-9	18	0.56	2.97
16	y	70-79	7	0.22	1.15
17	y	80-87	1	0.03	0.16

Analysis

From the lines of 6332 records:

The top 10 countries for fatal attacks are:



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AUSTRALIA              283
USA                    187
SOUTH AFRICA           106
PAPUA NEW GUINEA        56
MEXICO                  44
BRAZIL                  38
PHILIPPINES             35
REUNION                 29
NEW ZEALAND             24
CUBA                    24
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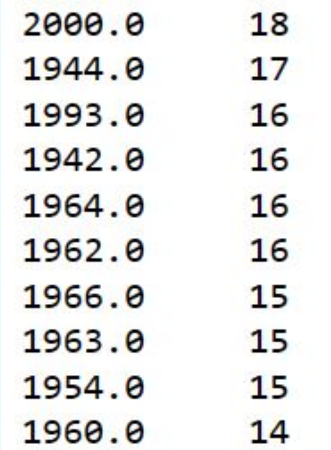
Analysis

From the lines of 6332 records:

The top 10 years for fatal attacks since 1960 are:



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2000.0      18
1944.0      17
1993.0      16
1942.0      16
1964.0      16
1962.0      16
1966.0      15
1963.0      15
1954.0      15
1960.0      14
```

Therefore...

Most attacks are not fatal, but among fatal cases, most happened in 2000 in Australia and victims tend to be males between 10-29 years old.