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MORE > MOORE

Shark Attack Analysis 19.01.24

Context

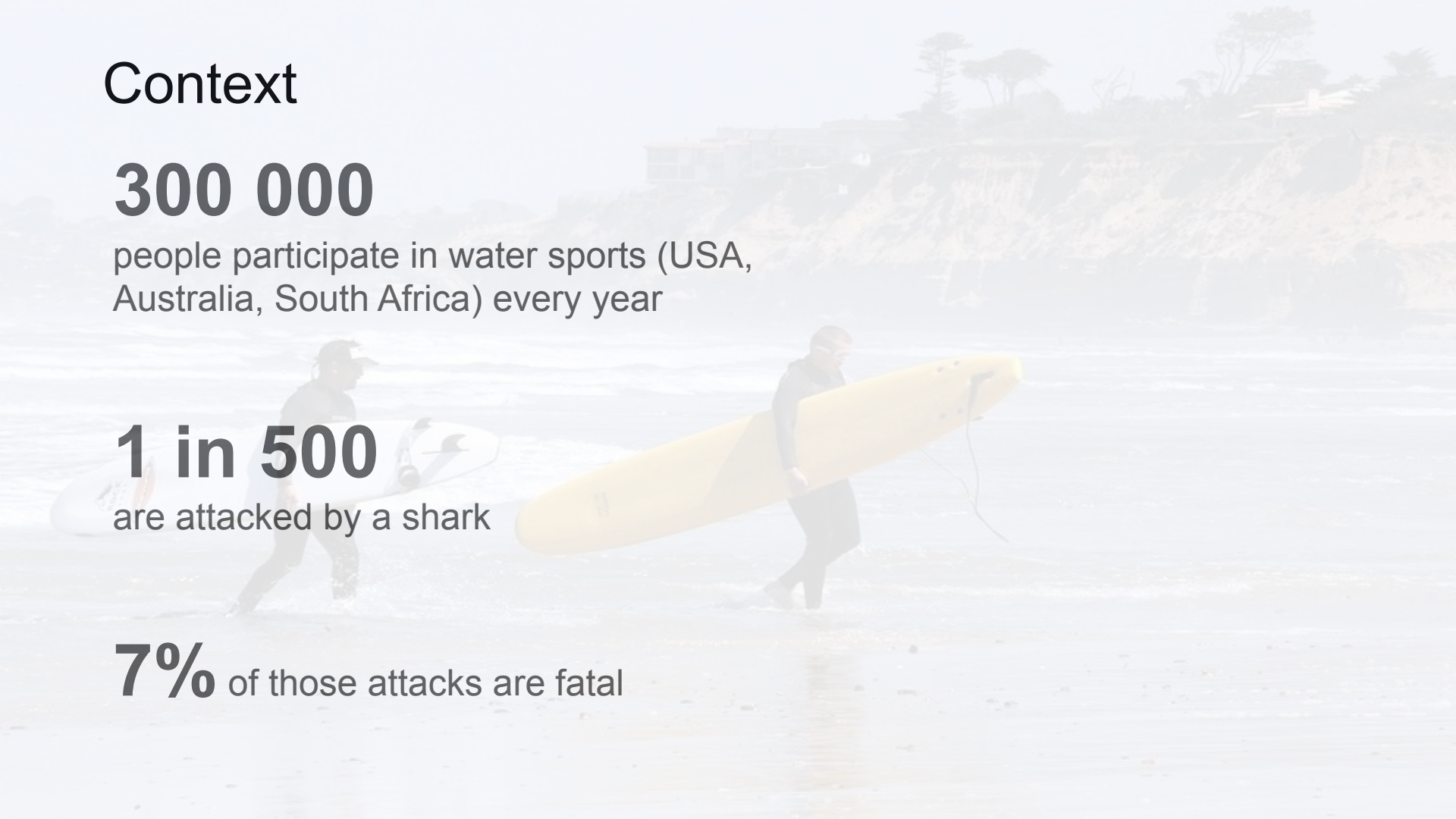
300 000

people participate in water sports (USA, Australia, South Africa) every year

1 in 500

are attacked by a shark

7% of those attacks are fatal



Business problem

Dying customers

Poor image

Declining sales

Hypotheses:

#1 Certain locations are more likely to lead to shark-related fatalities

#2 Certain activities are more likely to lead to shark-related fatalities

#3 Certain age groups are more vulnerable to shark-related attacks

#4 Certain months are more dangerous when considering shark-related fatalities

Data cleansing and manipulating activity:

Examples:

- made spelling uniform
- cleansed null values
 - removed
 - replaced with mode and median
- grouped activities to remove duplicates
- added additional columns:
 - activity risk scale (our perception thereof)
 - injury severity
- built risk calculator

Hypothesis 1: Certain locations are more likely to lead to shark-related fatalities



Visualisation of all shark attacks globally for all time

Hypothesis 1: Certain locations are more likely to lead to shark-related fatalities

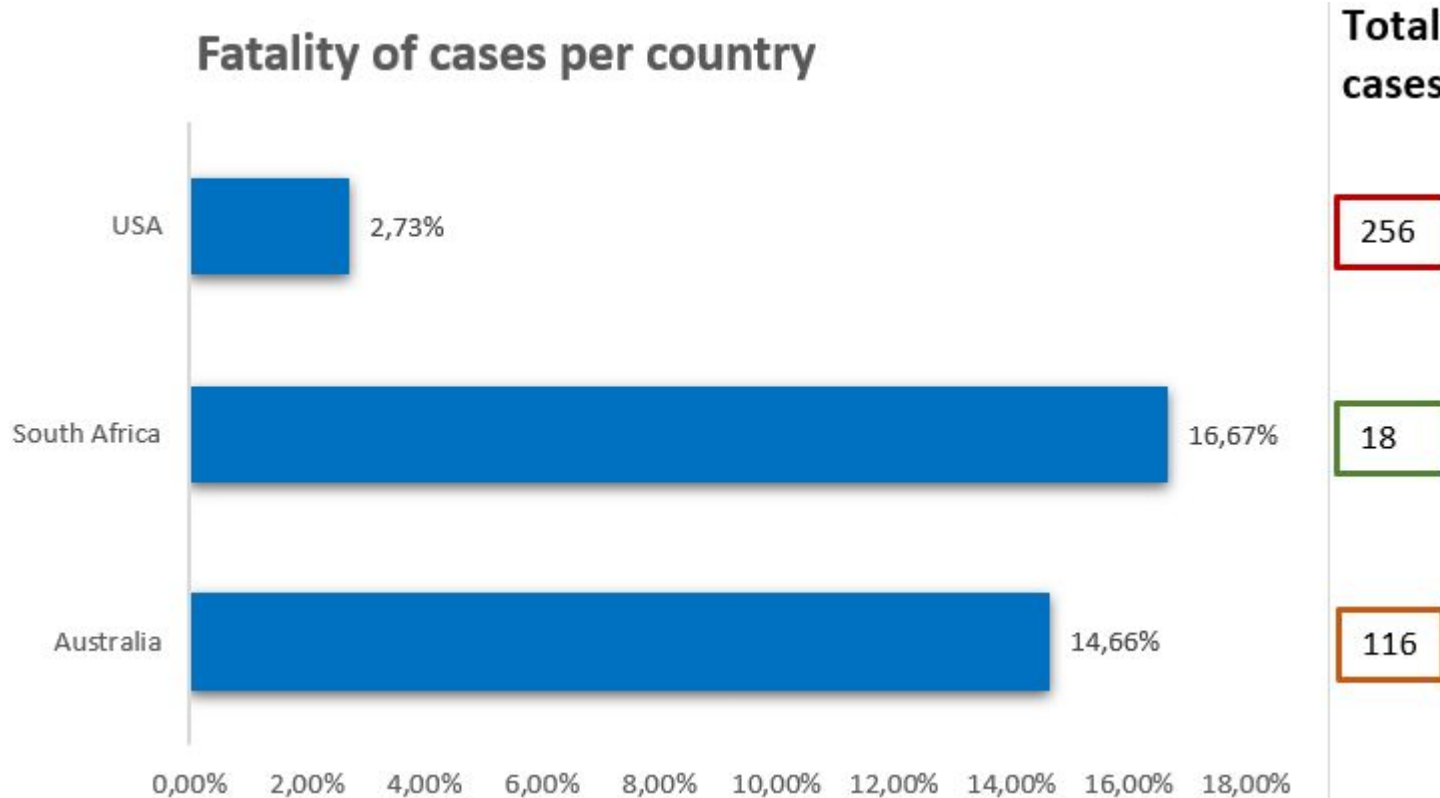


By isolating USA, Australia and South Africa (top 3 countries for shark attacks), we can sample 2/3 of the data 'population' (4610/6880 instances):

Hypothesis 1: Certain locations are more likely to lead to shark-related fatalities



Fatality of cases per country



Hypothesis 2

Certain activities are more likely to lead to shark-related fatalities

FAILED

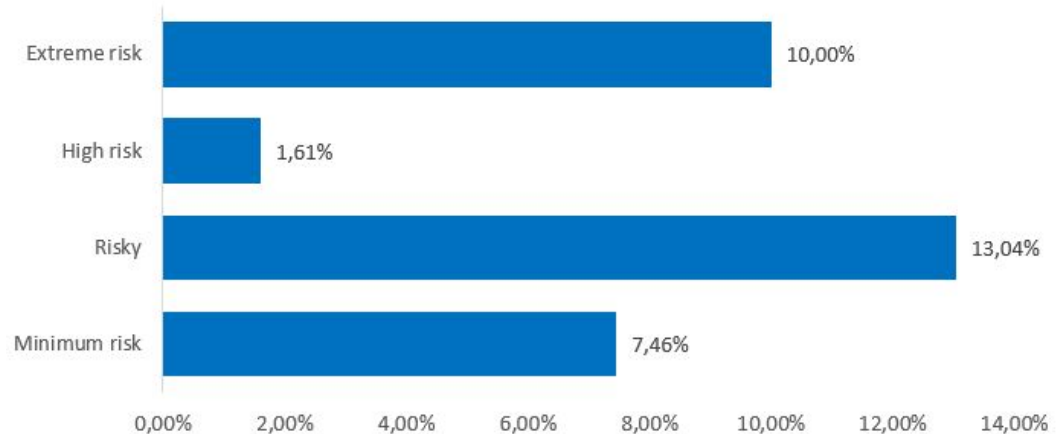
Extreme risk - underwater activities
(e.g. diving)

High risk - fishing

Risky - on-water activities (e.g. surfing,
boarding)

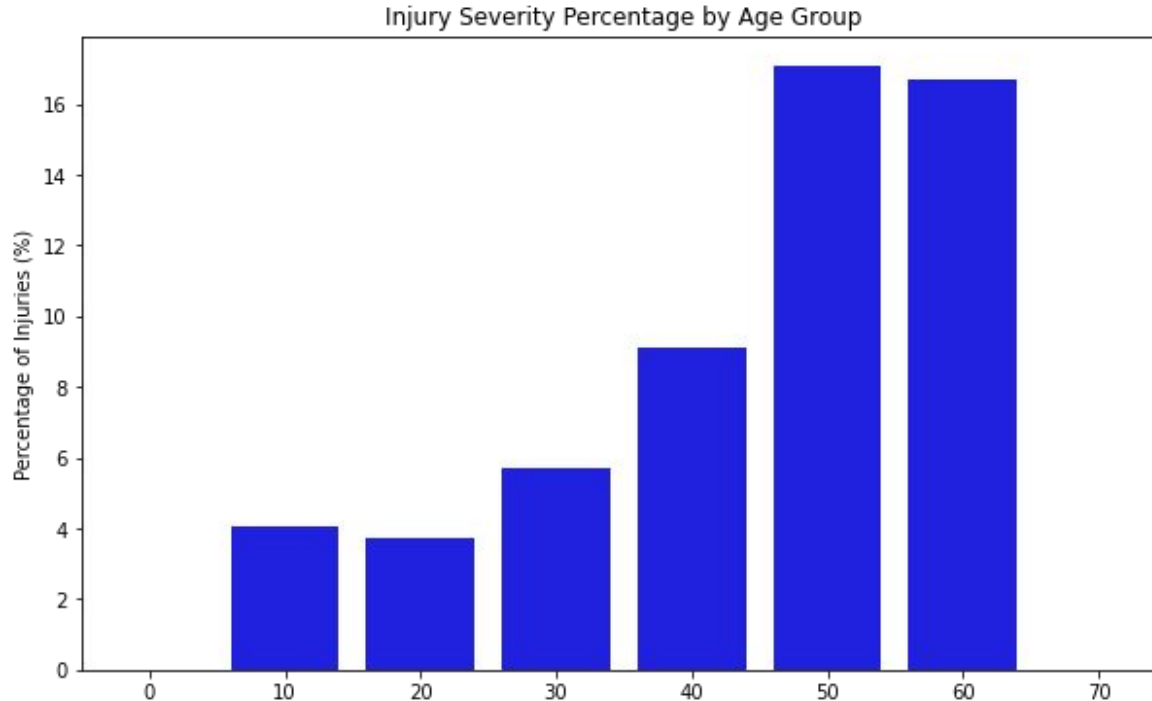
Minimum risk - everything else

Fatality of activities by type



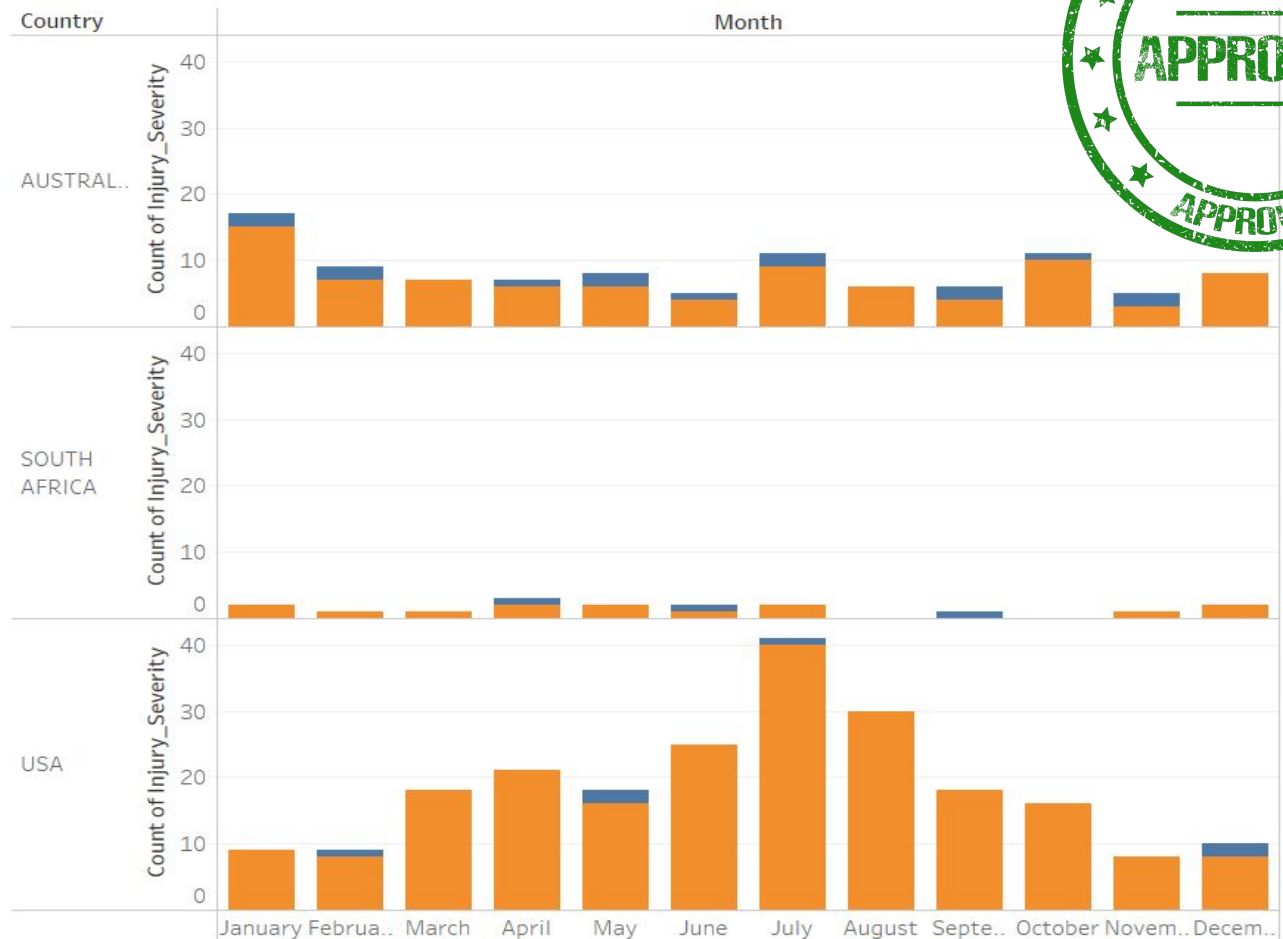
Hypothesis 3

Certain age groups are more vulnerable to shark-related attacks



Hypothesis 4

Certain months are more dangerous than others when considering shark-related fatalities



Hypotheses:

#1 Certain locations are more likely to lead to shark-related fatalities **VALIDATED**

Action: Increase tour offering in the USA

#2 Certain activities are more likely to lead to shark-related fatalities **FAILED**

Action: Further risk assess activities

#3 Certain age groups are more vulnerable to shark-related attacks **VALIDATED**

Action: Introduce protective measures for kids and over 50s

#4 Certain months are more dangerous when considering shark-related fatalities **VALIDATED**

Action #1: Improve marine monitoring in summer months (i.e. drones) due to increased demand for watersports

Action #2: Further research what drives increase in attack count in summer months

HOW MIGHT WE MITIGATE RISK?

Increasing transparency of risk through [risk calculator](#)

