THE TRAGEDY OF FLIGHT : A COMPREHENSIVE CRASH ANALYSIS

ABOUT MY TEAM

- Team ID : NM2023TMID07527
- Team Size : 4
- Team Leader : Shariqua Tabassum P
- Team Members:
    1. Manisha V
    2. Keerthiga M
    3. Meena SN

1.INTRODUCTION

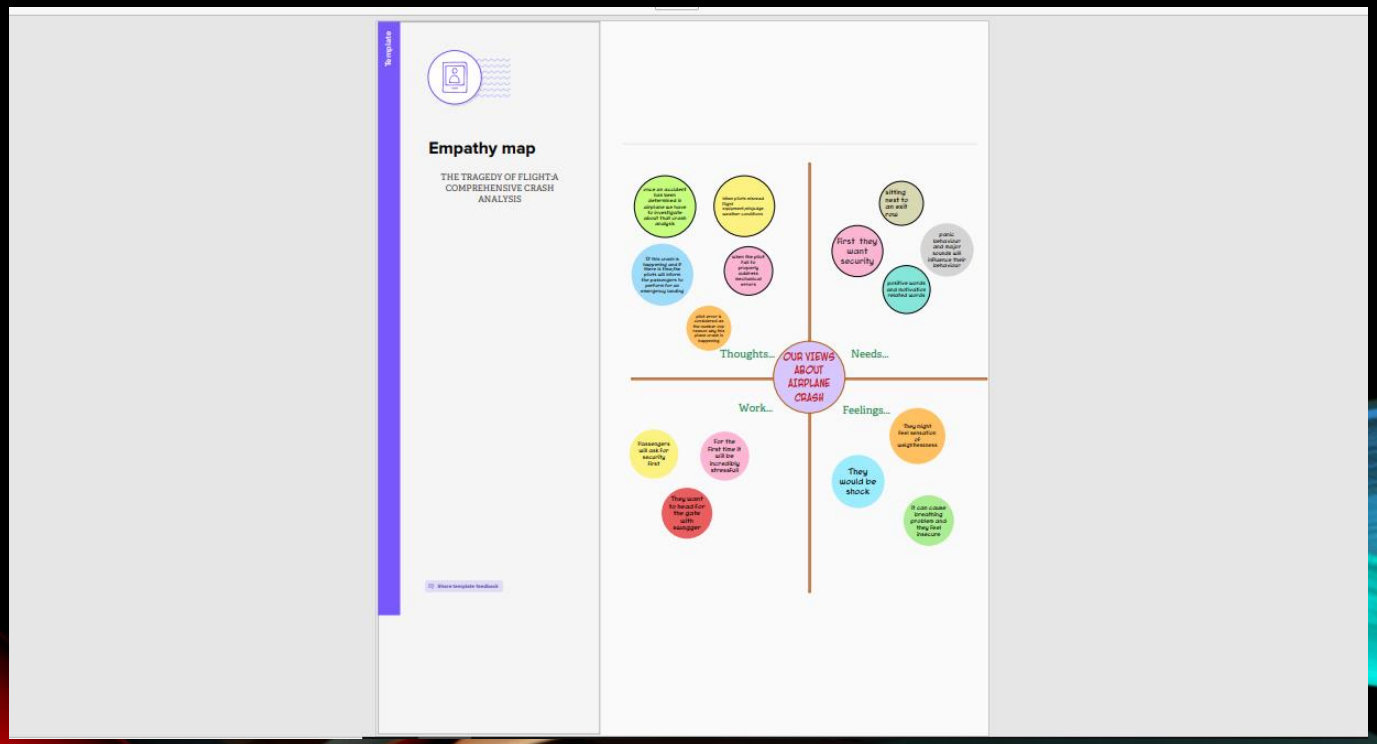
- An aviation accident is defined by the convention on international civil Aviation Annex 13 as an occurrence associated with the operation of an aircraft , which takes place from the time any person boards the aircraft with the intention of flight until all such persons have disembarked in which
- A person is fatally or seriously injured.
- The aircraft sustains significant damage or structural failure
- The aircraft goes missing or becomes completely inaccessible.

PURPOSE OF THIS PROJECT

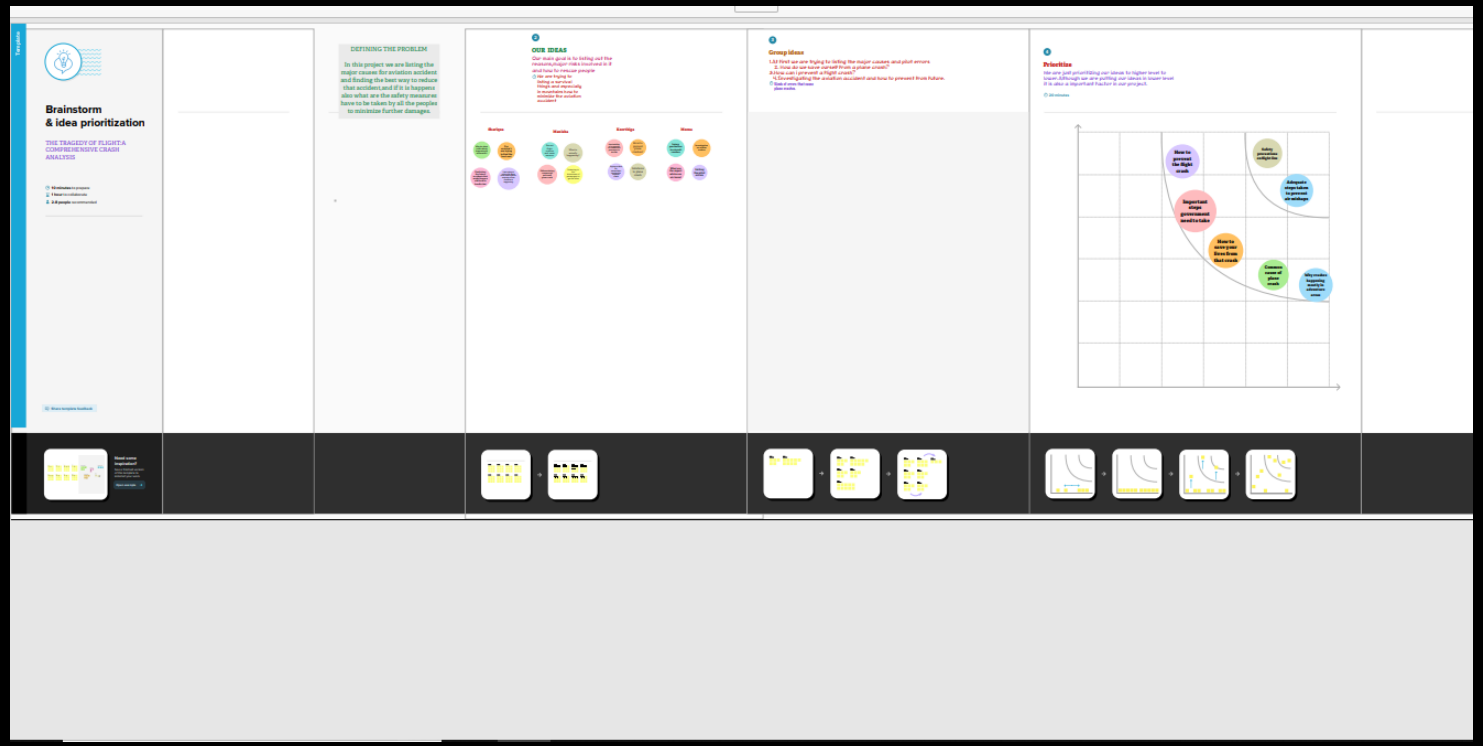
- An airplane crash analysis is a detailed investigation into the causes of an aviation accident. The goal of an airplane crash analysis is to identify any factors that contributed to the accident, with the ultimate goal of improving safety and preventing future accidents.

2.PROBLEM DEFINITION AND DESIGN THINKING.

Empathy Map

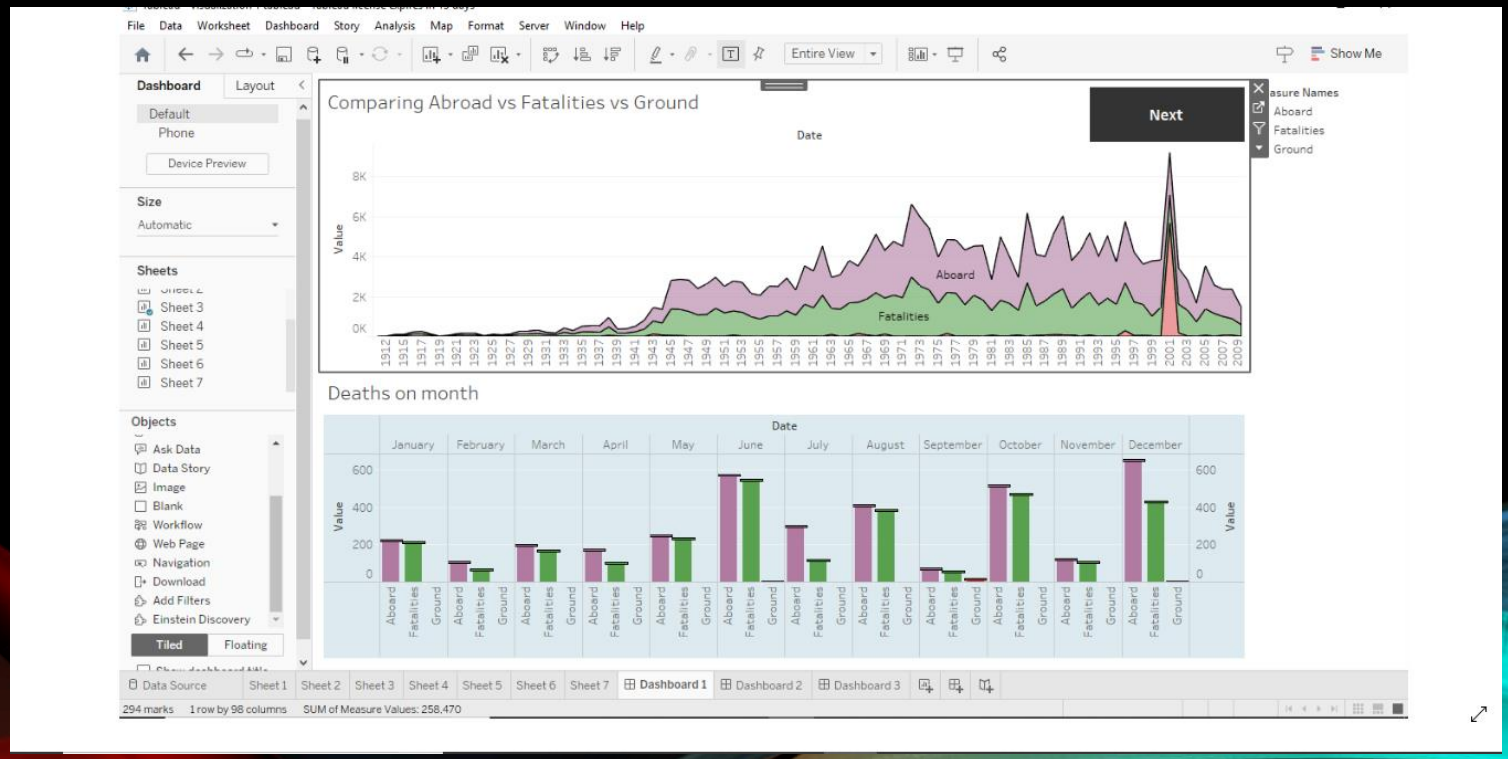


IDEATION AND BRAINSTORMING MAP



3.RESULT

DASHBOARD 1



DASHBOARD 2

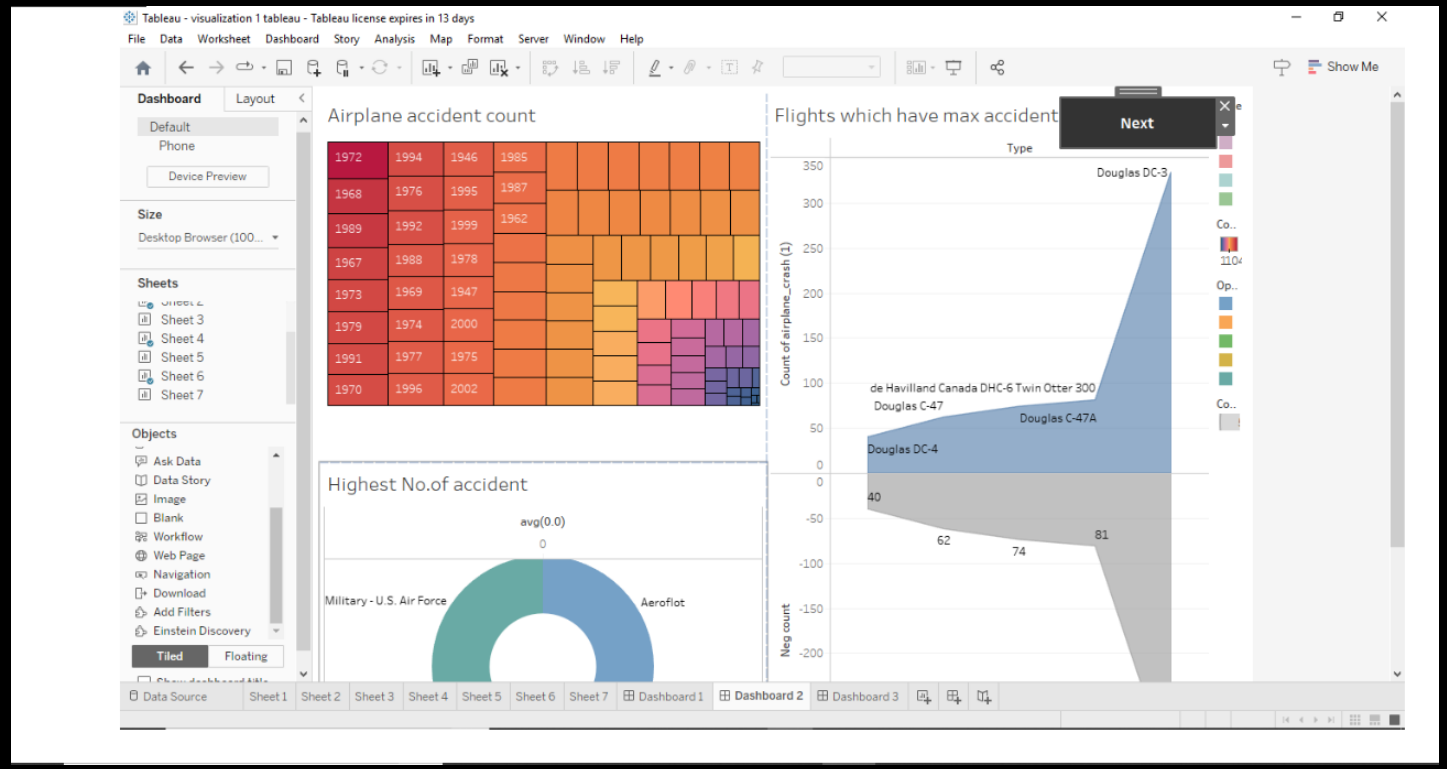
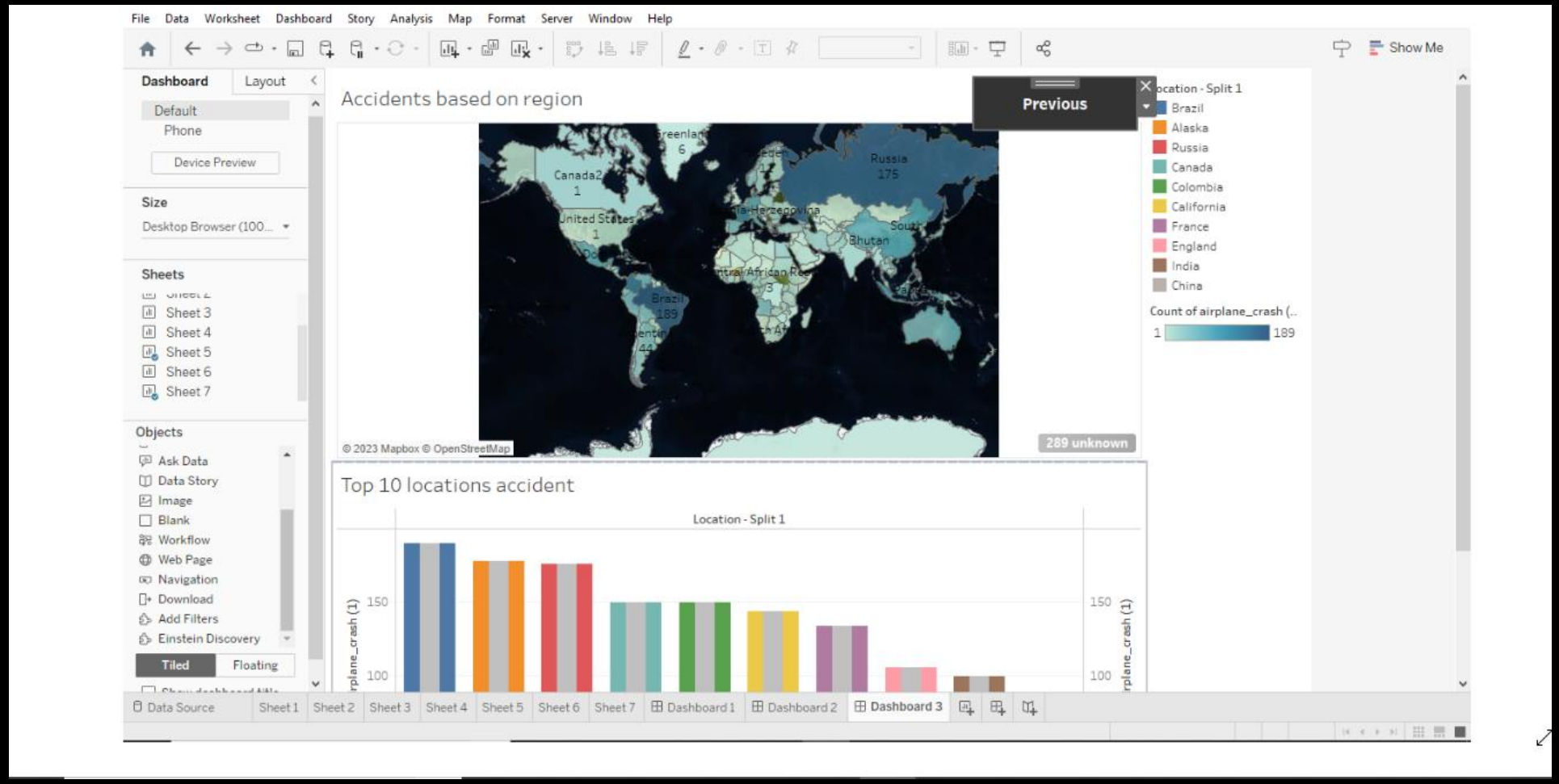


Tableau - visualization 1 tableau - Tableau license expires in 13 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Show Me
Dashboard Layout
Default
Phone
Device Preview
Size
Desktop Browser (100...
Sheets
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Objects
Ask Data
Data Story
Image
Blank
Workflow
Web Page
Navigation
Download
Add Filters
Einstein Discovery
Tiled
Floating
Airplane accident count
1972 1994 1946 1985
1968 1976 1995 1987
1989 1992 1999 1962
1967 1988 1978
1973 1969 1947
1979 1974 2000
1991 1977 1975
1970 1996 2002
Highest No.of accident
avg(0.0)
0
Military - U.S. Air Force
Aeroplot
Flights which have max accident
Next
Type
Count of airplane_crash (1)
Douglas DC-3
de Havilland Canada DHC-6 Twin Otter 300
Douglas C-47
Douglas C-47A
Douglas DC-4
40
62
74
81
Neg count
Data Source
Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Dashboard 1
Dashboard 2
Dashboard 3

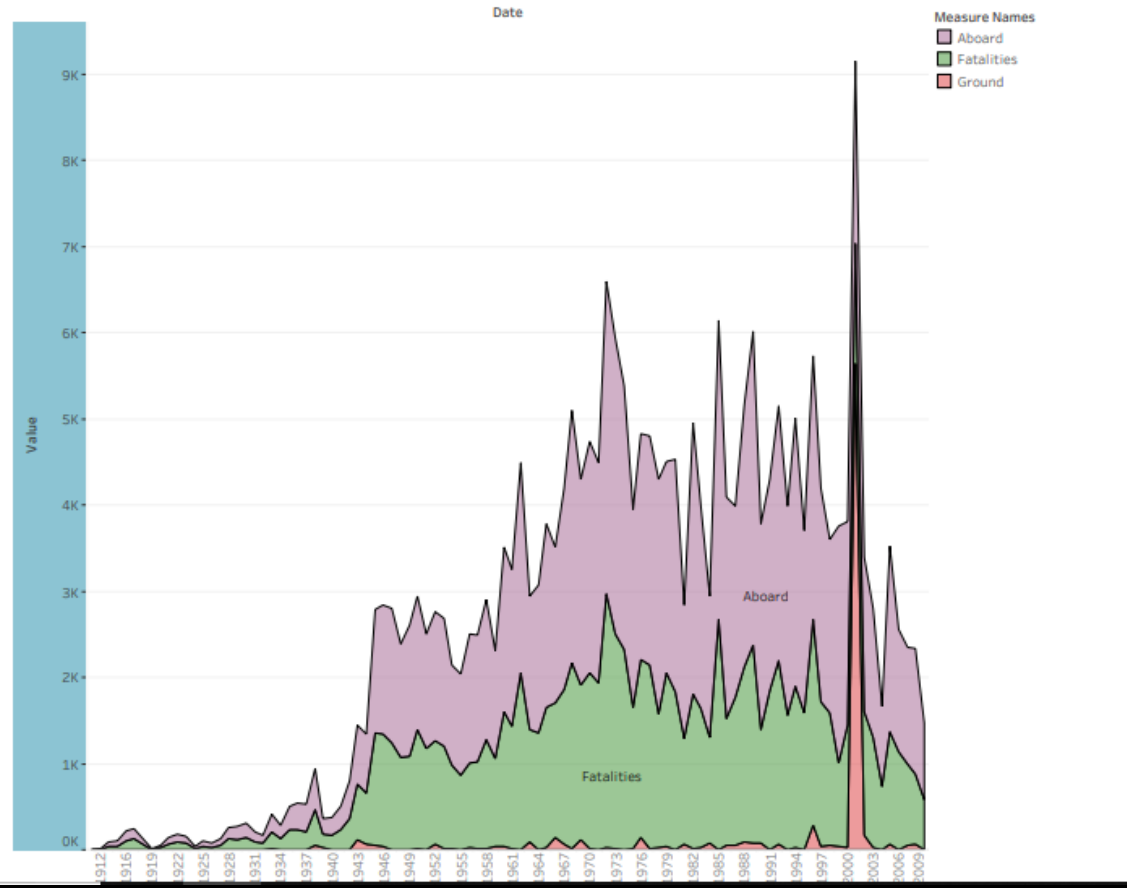
DASHBOARD 3


File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Show Me
Dashboard
Layout
Default
Phone
Device Preview
Size
Desktop Browser (100...
Sheets
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Objects
Ask Data
Data Story
Image
Blank
Workflow
Web Page
Navigation
Download
Add Filters
Einstein Discovery
Tiled
Floating
Accidents based on region
Previous
Location - Split 1
Brazil
Alaska
Russia
Canada
Colombia
California
France
England
India
China
Count of airplane_crash (...
1
189
Russia
175
Canada2
1
United States
1
Bhutan
Brazil
189
© 2023 Mapbox © OpenStreetMap
289 unknown
Top 10 locations accident
Location - Split 1
150
100
Data Source
Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Dashboard 1
Dashboard 2
Dashboard 3

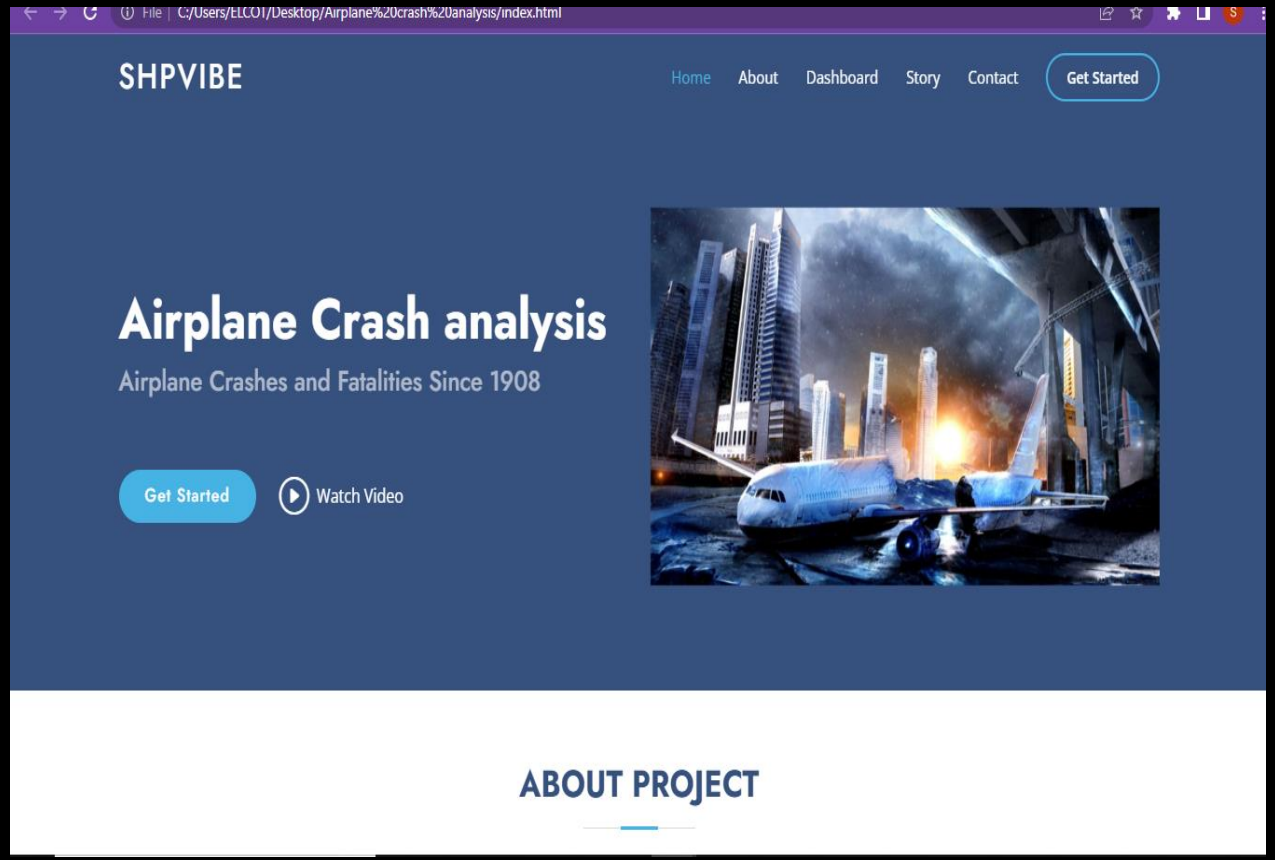
TRAGEDY OF FLIGHT : STORY

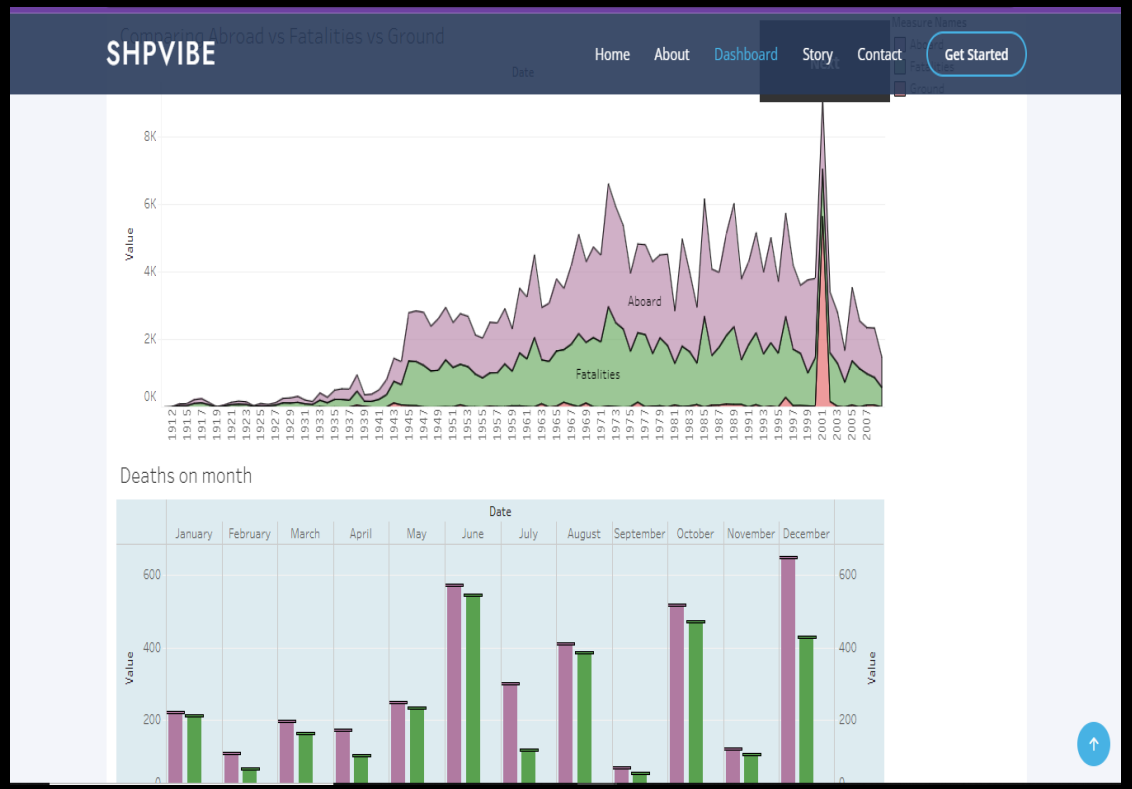
Story 1

Sum of accidents type(abroad,fatalities,gro..	No.of accidents based on years.	Accidents happened in 1972 (MAX ACCIDENT..	Highest No.of accident happened by Operato..	Top 10 locations which had more accidents.	Top 3 flights which have max accident his..	Accidents based on re..



WEB INTEGRATION





4.PROS AND CONS OF OUR PROPOSED SOLUTION.

ADVANTAGES

1. Crash analysis is a major tool in obtaining an understanding of the existing situation and how it could be improved by ITS

2. It helps to provide an understanding of the most effective solutions and is essential for monitoring and evaluating the safety of plane network

3. It has low infrastructure , no physical barriers , defence service and security.

DISADVANTAGES

1. In crashes the aircraft structure collapses and the individual is injured by impact.
2. Security Measures can be inconvenient and Time consuming.
3. An aviation accident may damage or compress a passengers spinal cord , causing partial or total paralysis.

Pilot error is the number one cause of aviation accidents.

5.APPLICATION OF OUR PROPOSED PROJECT

APPLICATION

- With the help of this we are able to find the accidents based on regions.
- It can be used in the field of military , research, transportation of goods and services.
- It can provide a rapid worldwide transportation network, generating economic growth, creating jobs, and facilitating international trade and tourism.
- With the help of this project we can reduce the aviation accident.

6.CONCLUSION

1. Hence in this project we try to find a way to reduce the aviation accident in future

2. With the help of Data visualizations we have analyse the sum of accidents types in comparing abroad vs fatalities vs ground and the number of accidents based on years, maximum accidents happened in 1972 based on months , highest number of accident happened by operators, top 10 locations which had more accident, top 3 flights which have maximum accident history and the accidents based on regions.

7. FUTURE SCOPE

1. Reducing the lift – to – drag ratio of an aircraft can make it more aerodynamically efficient and help reduce the aircrafts weight and fuel use.

2. The Enhanced ground proximity warning system (EGPWS) is a cutting – edge technology that helps to improve the safety of aircraft by alerting pilots of potential hazards such as approaching terrain or obstacles.

3. Hydrogen – A longer term reality for larger aircraft

4. For larger commercial aircraft and smaller longer range jets, hydrogen power likely offers more potential.

Hydrogen can be used directly as an engine fuel or as part of a fuel cell to produce electricity for engine power.