1 INTRODUCTION

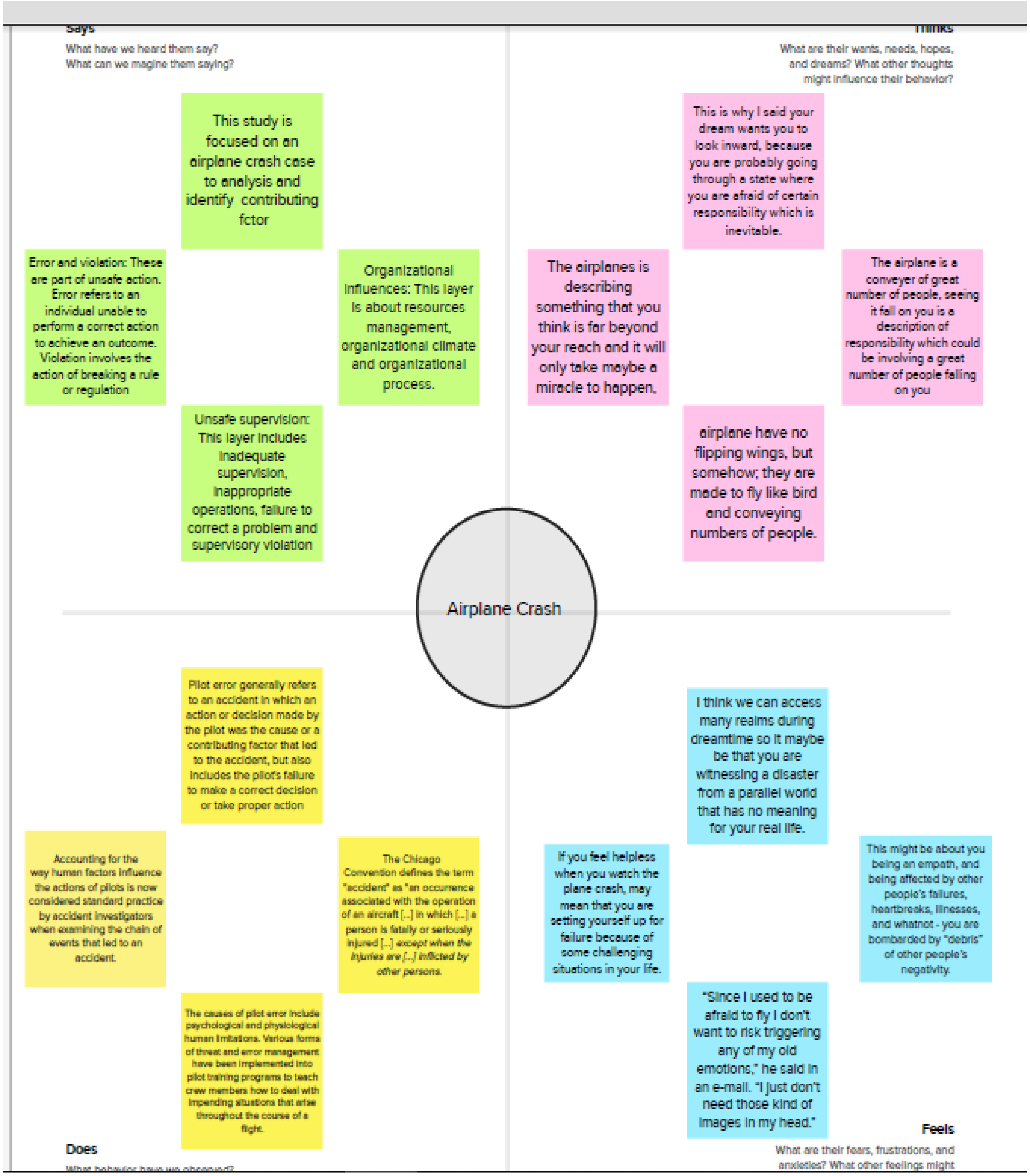
Air accident is caused due to pilot error, mechanical error, bad weather, sabotages or human error. these error can be happened any time. air accident is also called flying mischance. aeronautics misfortunes can happened at any time .flying mischance cases have a Great degree complexity .aircraft crashes cause harm to the population as it may lead to the deaths of people or may even cause Injuries to the people. crash investigation is a major research area and the major techniques used for this investigation are statistics, grid computing, cloud computing, digital image processing and data mining.

1.1 Purpose

In this project we have analyzed the various aspects of investigation into causes of accidents and incidents, and the resulting safety recommendations, help to prevent such events from re-occuring and thus play an important role in improving aviation safety. The purpose of investigations is to identify the causes of accidents, rather than to assign blame and liability.

1 PROBLEM DEFINITION AND DESIGN THINKING

1.1 Empathy Map



Says

What have we heard them say?
What can we magine them saying?

This study is focused on an airplane crash case to analysis and identify contributing fctor

Error and violation: These are part of unsafe action. Error refers to an individual unable to perform a correct action to achieve an outcome. Violation involves the action of breaking a rule or regulation

Organizational Influences: This layer is about resources management, organizational climate and organizational process.

Unsafe supervision: This layer includes inadequate supervision, inappropriate operations, failure to correct a problem and supervisory violation

Thinks

What are their wants, needs, hopes, and dreams? What other thoughts might influence their behavior?

This is why I said your dream wants you to look inward, because you are probably going through a state where you are afraid of certain responsibility which is inevitable.

The airplanes is describing something that you think is far beyond your reach and it will only take maybe a miracle to happen,

The airplane is a conveyer of great number of people, seeing it fall on you is a description of responsibility which could be involving a great number of people falling on you

airplane have no flipping wings, but somehow; they are made to fly like bird and conveying numbers of people.

Airplane Crash

Pilot error generally refers to an accident in which an action or decision made by the pilot was the cause or a contributing factor that led to the accident, but also includes the pilot's failure to make a correct decision or take proper action

Accounting for the way human factors influence the actions of pilots is now considered standard practice by accident investigators when examining the chain of events that led to an accident.

The Chicago Convention defines the term "accident" as "an occurrence associated with the operation of an aircraft [...] in which [...] a person is fatally or seriously injured [...] *except when the injuries are [...] inflicted by other persons.*

The causes of pilot error include psychological and physiological human limitations. Various forms of threat and error management have been implemented into pilot training programs to teach crew members how to deal with impending situations that arise throughout the course of a flight.

Does

What behavior have we observed?

I think we can access many realms during dreamtime so it maybe be that you are witnessing a disaster from a parallel world that has no meaning for your real life.

If you feel helpless when you watch the plane crash, may mean that you are setting yourself up for failure because of some challenging situations in your life.

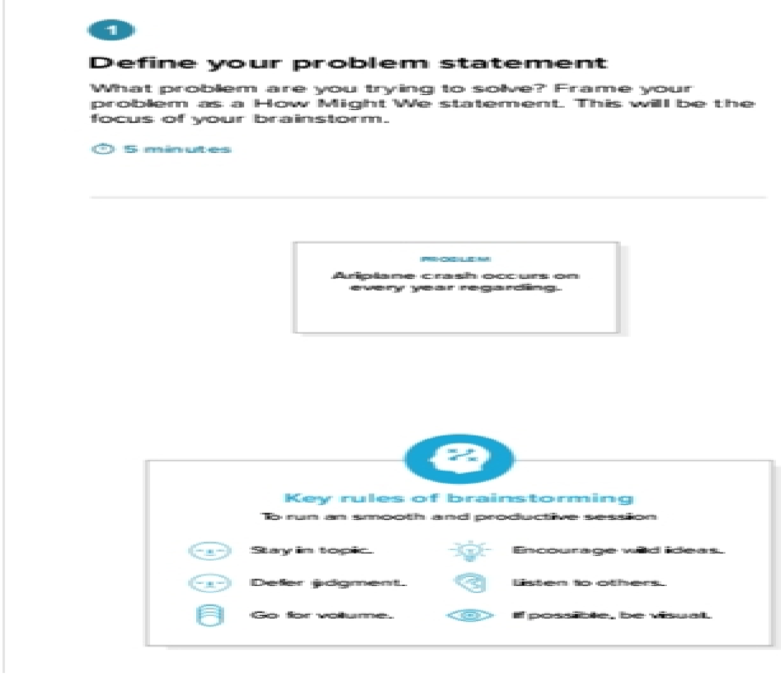
This might be about you being an empath, and being affected by other people's failures, heartbreaks, illnesses, and whatnot - you are bombarded by "debris" of other people's negativity.

"Since I used to be afraid to fly I don't want to risk triggering any of my old emotions," he said in an e-mail. "I just don't need those kind of images in my head."

Feels

What are their fears, frustrations, and anxieties? What other feelings might

1.2 Ideation and brainstorming map



1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

5 minutes

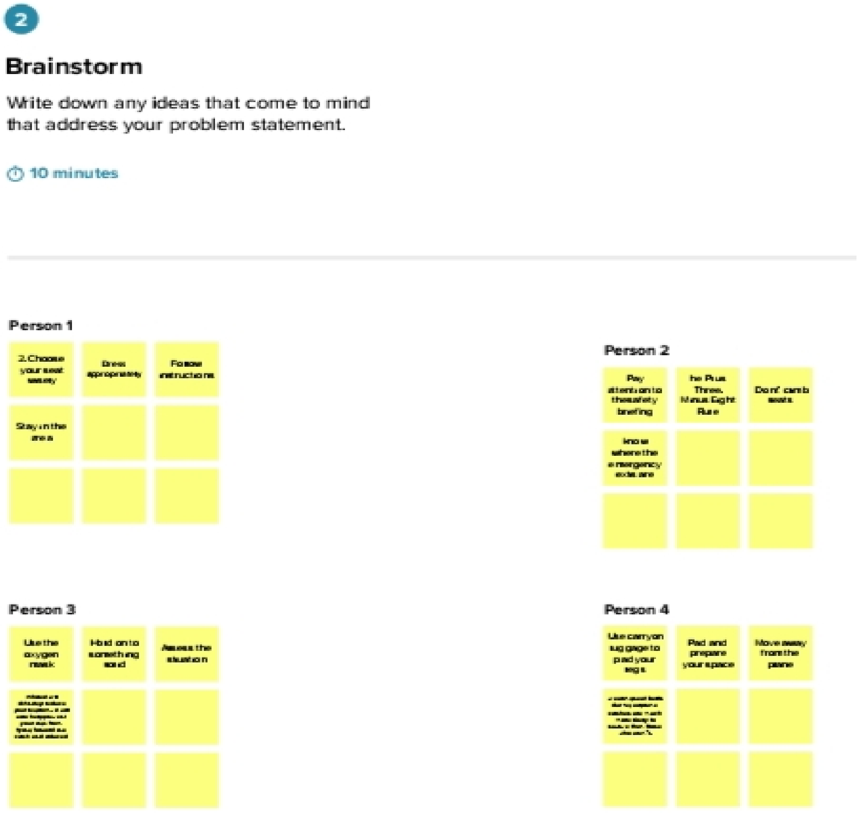
PROBLEM

Ariplane crash occurs on every year regarding.

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Defer judgment.
- Go for volume.
- Encourage wild ideas.
- Listen to others.
- If possible, be visual.



2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

Person 1

- 2.Choose your seat wisely
- Dress appropriately
- Follow instructions
- Stay in the area

Person 2

- Pay attention to the safety briefing
- he Plus Three, Minus Eight Rule
- Don't climb seats
- know where the emergency exits are

Person 3

- Use the oxygen mask
- Hold on to something solid
- Assess the situation
- [illegible]

Person 4

- Use carry on luggage to pad your legs
- Pad and prepare your space
- Move away from the plane
- [illegible]

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

Pilots are skilled, highly trained individuals, and their performance is constantly being assessed. Surely they shouldn't make mistakes which result in air crashes.

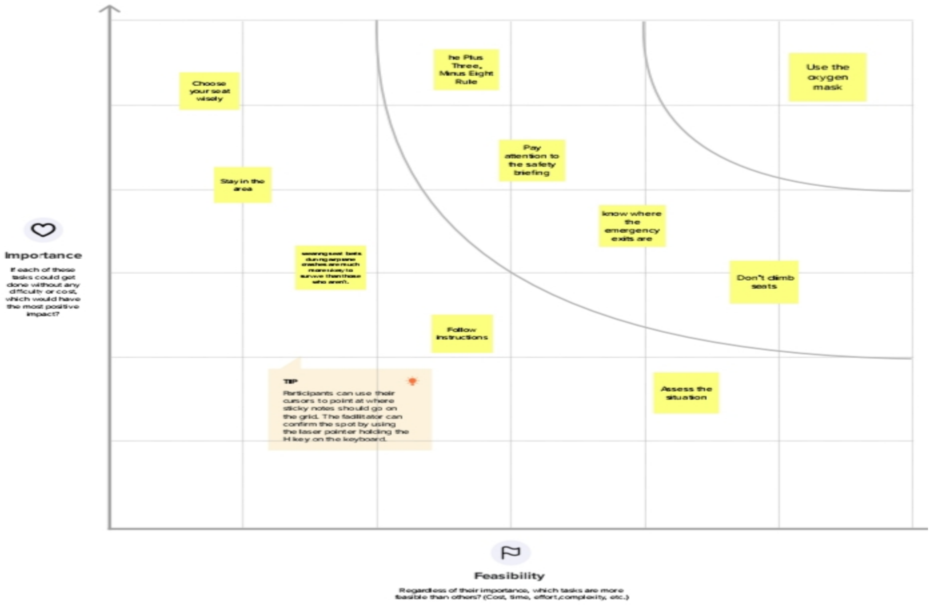
But planes are massive feats of complex engineering, and are made up of hundreds of separate systems and parts. A defect or failure in any one of these can lead to a dangerous situation

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes


Choose your seat wisely
he Plus Three, Minus Eight Rule
Use the oxygen mask
Pay attention to the safety briefing
Stay in the area
know where the emergency exits are
wearing seat belts during airplane crashes are much more likely to survive than those who aren't.
Don't climb seats
Follow instructions
Assess the situation
Importance
Feasibility

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the H key on the keyboard.

Importance

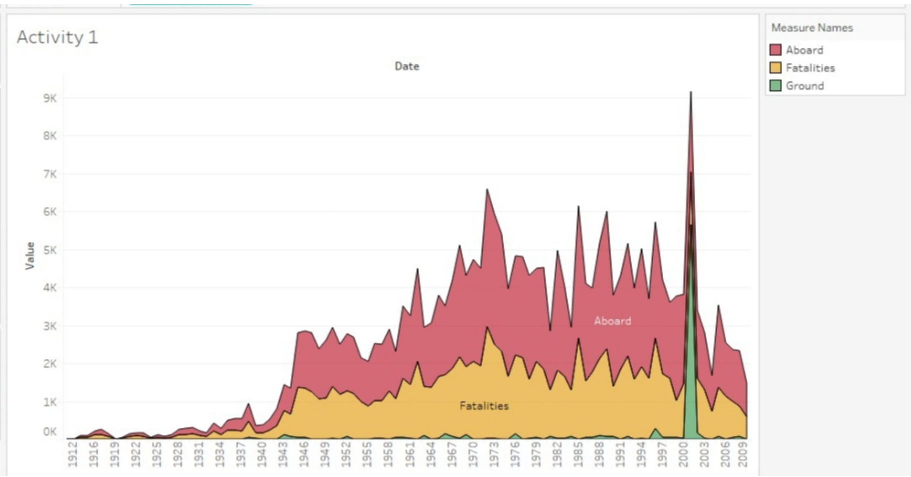
If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

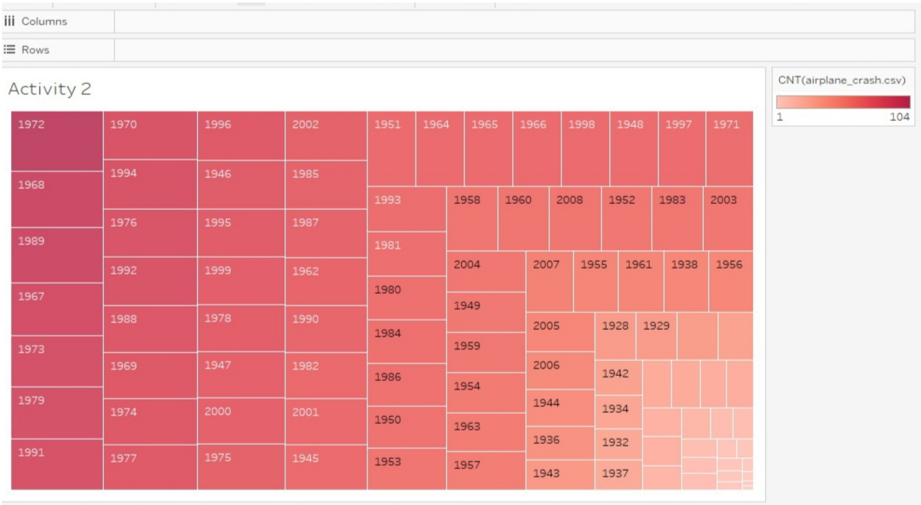
Feasibility

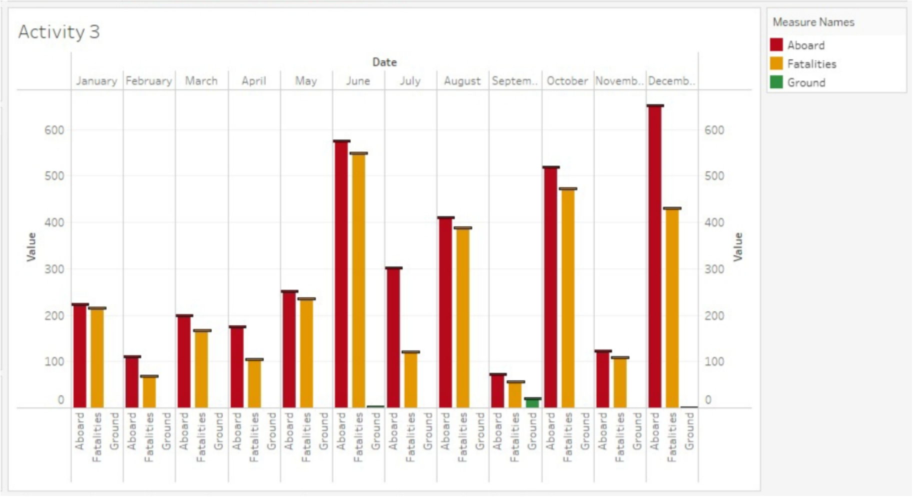
Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort,complexity, etc.)

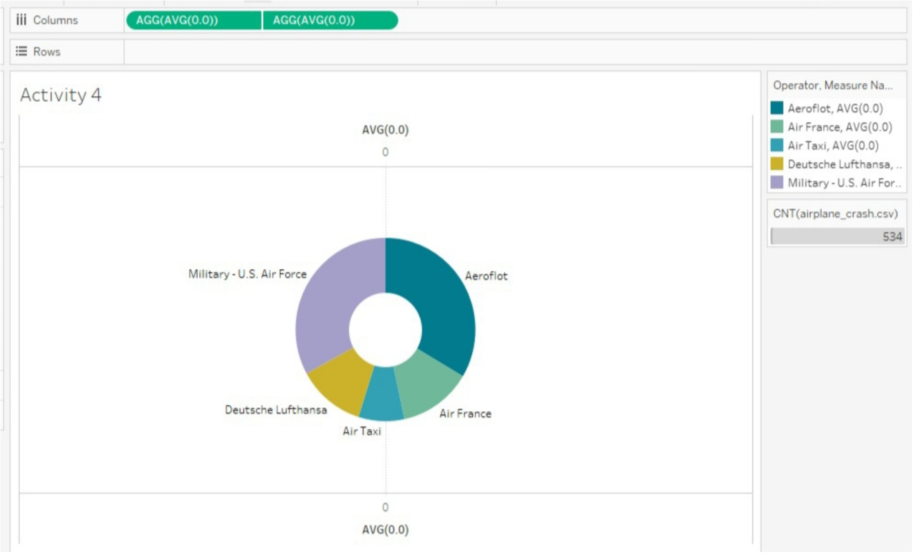
3 RESULT

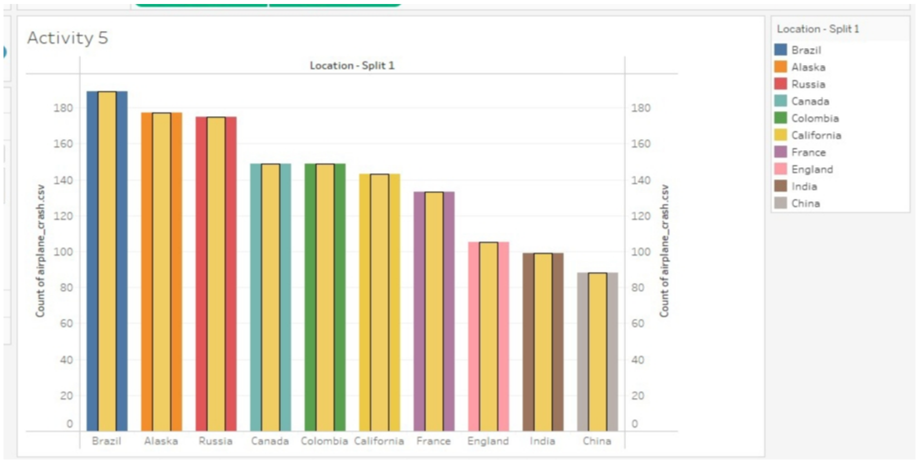
- Comparing Aboard vs Fatalities vs Ground
- Max accidents based on years
- Accident happened in 1972 (MAX ACCIDENTS) based on months
- Highest No. of accidents happened by Operators
- Top 10 locations which had more accidents
- Top 10 flights which have max accidents history
- Accidents based on regions

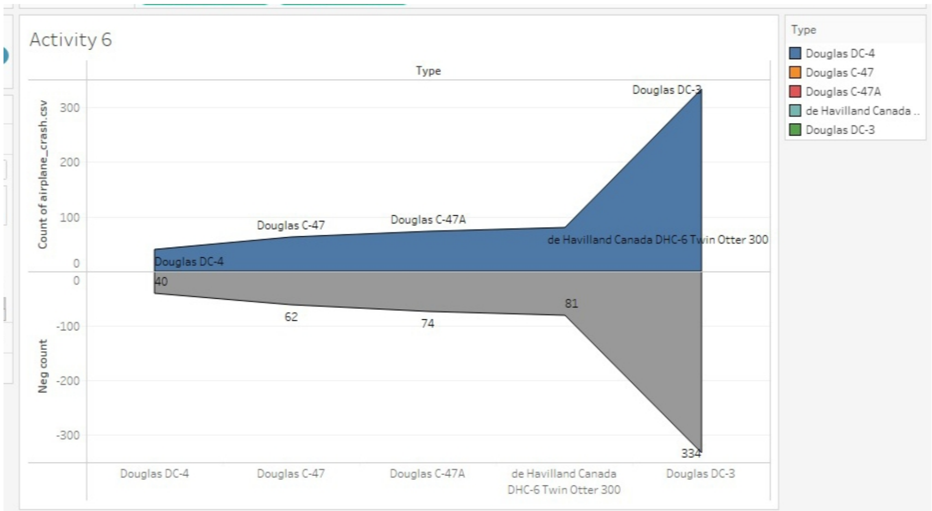


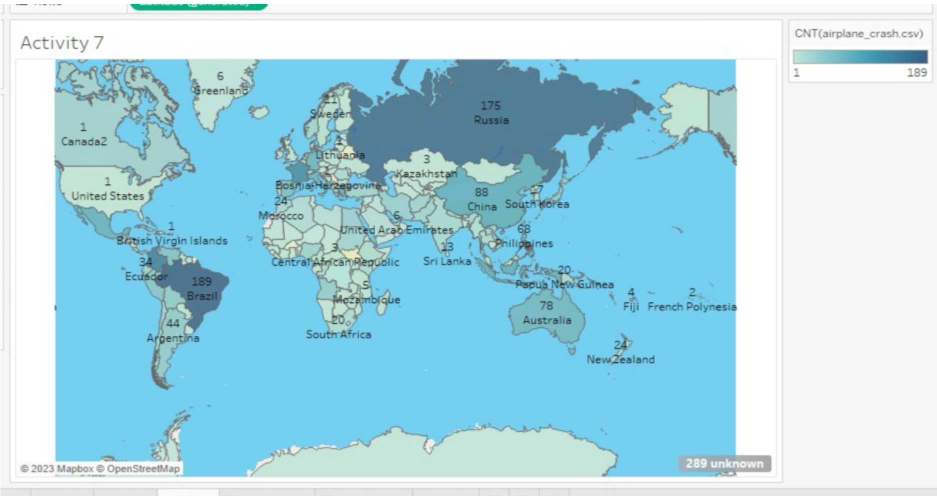



Activity 3
Date
January
February
March
April
May
June
July
August
Septem..
October
Novemb..
Decemb..
Value
600
500
400
300
200
100
0
Aboard
Fatalities
Ground
Measure Names
Aboard
Fatalities
Ground


Columns
AGG(AVG(0.0))
AGG(AVG(0.0))
Rows
Activity 4
AVG(0.0)
0
Military - U.S. Air Force
Aeroflot
Air France
Air Taxi
Deutsche Lufthansa
0
AVG(0.0)
Operator, Measure Na...
Aeroflot, AVG(0.0)
Air France, AVG(0.0)
Air Taxi, AVG(0.0)
Deutsche Lufthansa, ..
Military - U.S. Air For..
CNT(airplane_crash.csv)
534


Activity 5
Location - Split 1
Count of airplane_crash.csv
180
160
140
120
100
80
60
40
20
0
Brazil
Alaska
Russia
Canada
Colombia
California
France
England
India
China
Location - Split 1
Brazil
Alaska
Russia
Canada
Colombia
California
France
England
India
China




Activity 7
CNT(airplane_crash.csv)
1
189
6
Greenland
1
Canada2
1
United States
1
British Virgin Islands
34
Ecuador
189
Brazil
44
Argentina
11
Sweden
1
Lithuania
1
Bosnia-Herzegovina
24
Morocco
6
United Arab Emirates
3
Central African Republic
5
Mozambique
20
South Africa
175
Russia
3
Kazakhstan
88
China
17
South Korea
68
Philippines
13
Sri Lanka
20
Papua New Guinea
78
Australia
4
Fiji
2
French Polynesia
24
New Zealand
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289 unknown

CONCLUSION

Airplane crash analysis is performed to determine the cause of errors once an accident has happened. In the modern aviation industry, it is also used to analyze a database of past accidents in order to prevent an accident from happening. Many models have been used to only for accident investigation but also for educational purpose.