

1 INTRODUCTION

Overview

Our project is Airplane crash analysis, which is a detailed investigation into causes of an aviation accidents since 1908, involving the collection and analysis of a wide range of data including information about the aircraft and its systems, the operators, and any other relevant factors.

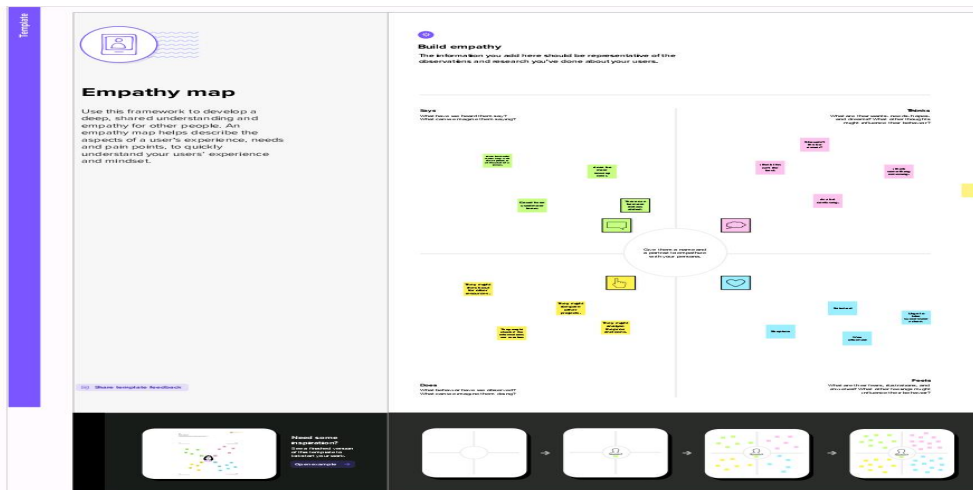
Purpose

The goal of this project is to identify any factor that contributed to the accidents, with the ultimate goal of improving safety and preventing future accidents.

2 Problem Definition & Design Thinking

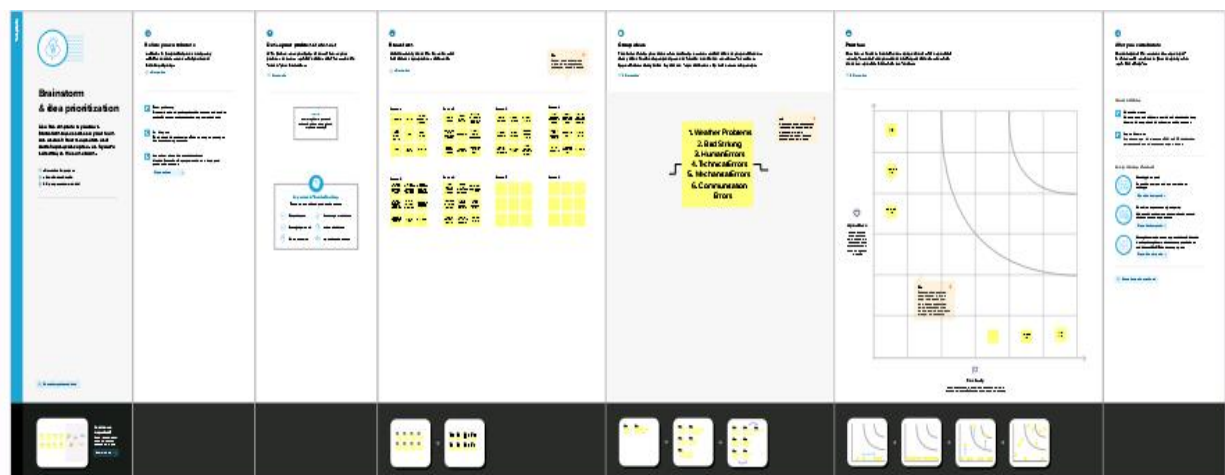
Empathy Map

Paste the empathy map screenshot



Ideation & Brainstorming Map

Paste the Ideation & brainstorming map screenshot

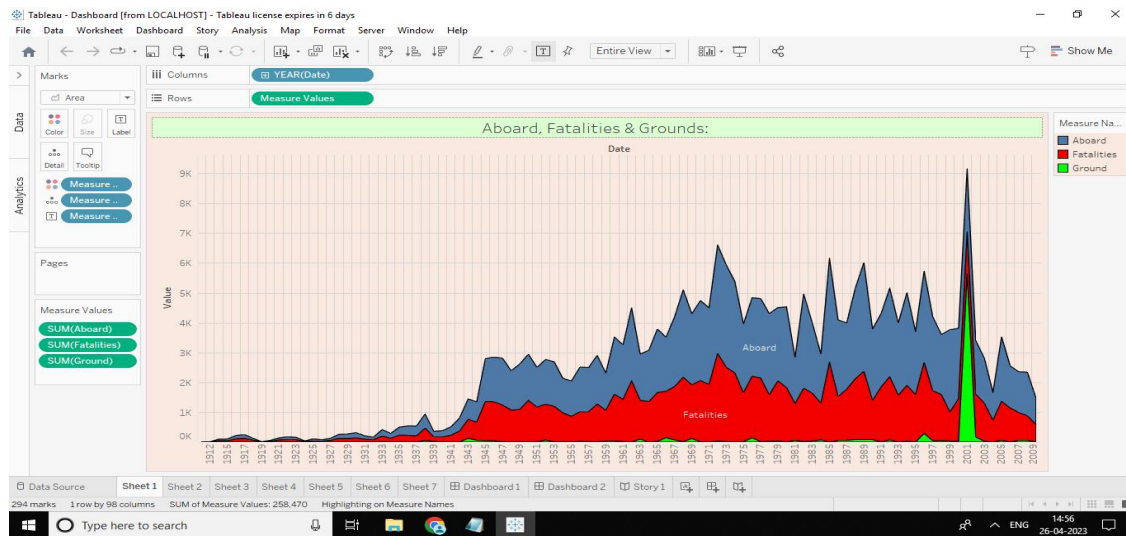


3 RESULT

Final findings (Output) of the project along with screenshot

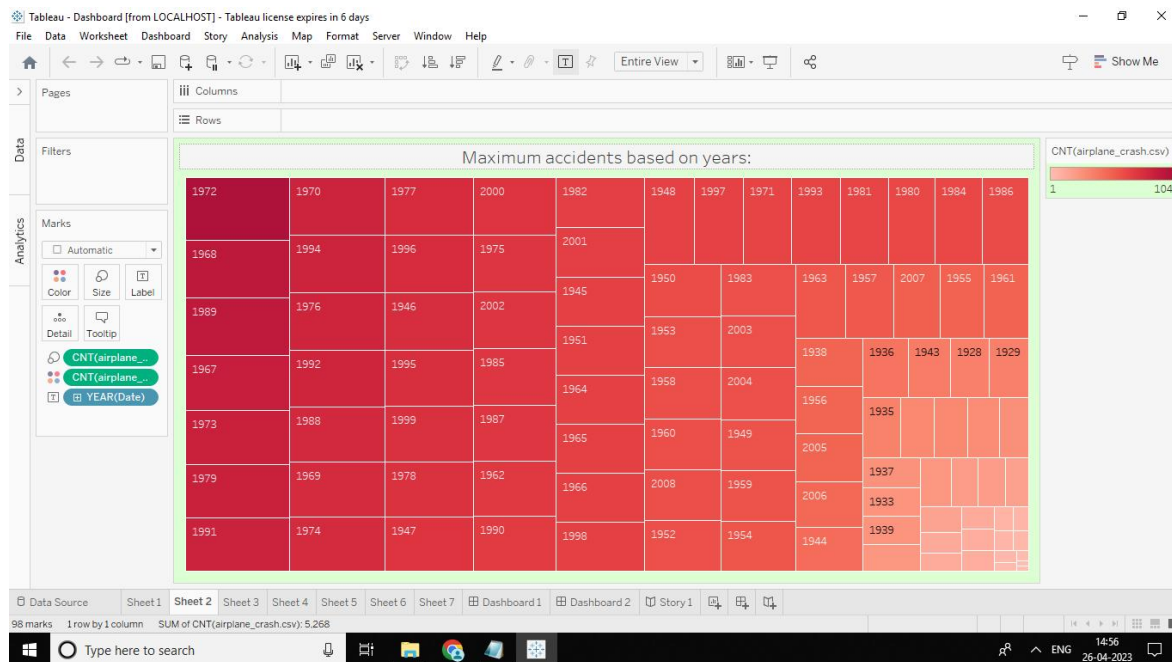
Aboard vs Fatalities vs Grounds:

The analysis of the history of the aircraft crash of the past century reveals that there are high chances of high fatality rate once a crash happens. So the best solution would be to rectify this is to identify the root cause of the accidents and take efficient preventive measures.

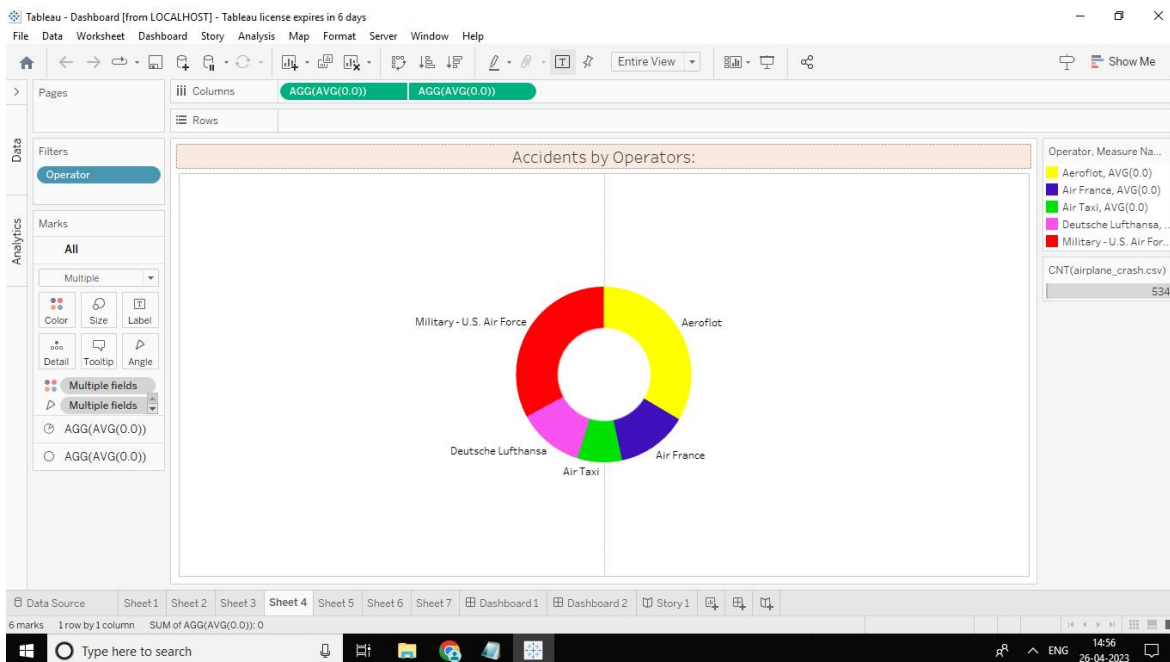
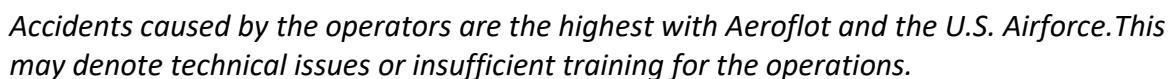


Maimum number of accidents based on Years:

The highest number of accidents happened on 1972.

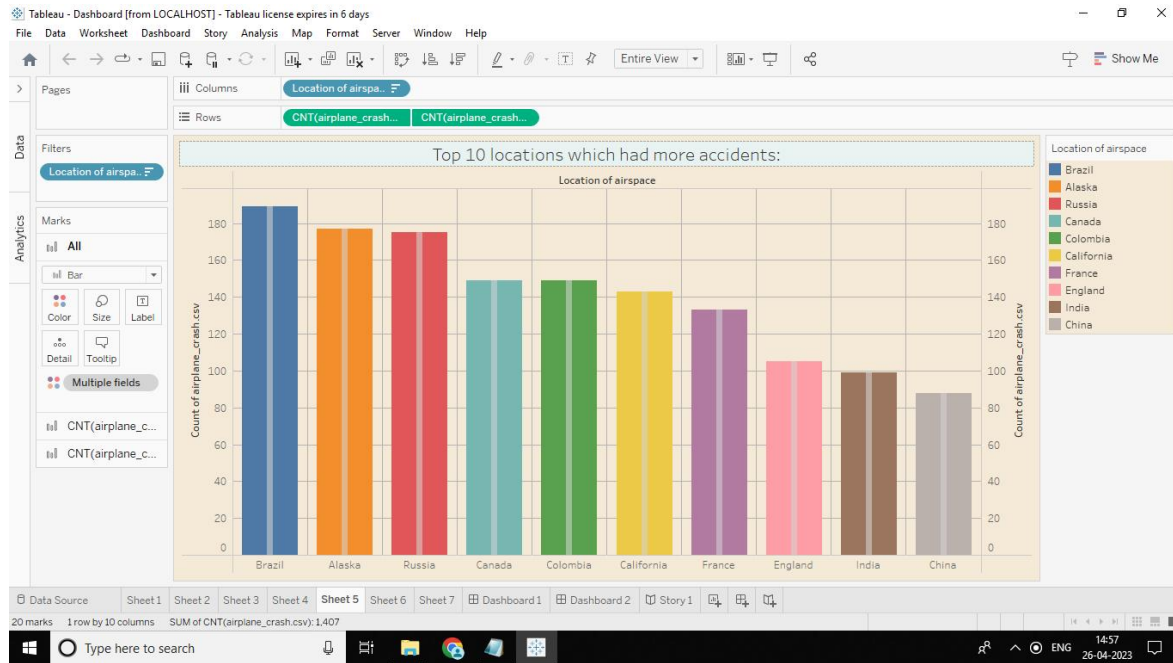


In 1972, the highest number of both aboards and fatalities happened in the month of December.



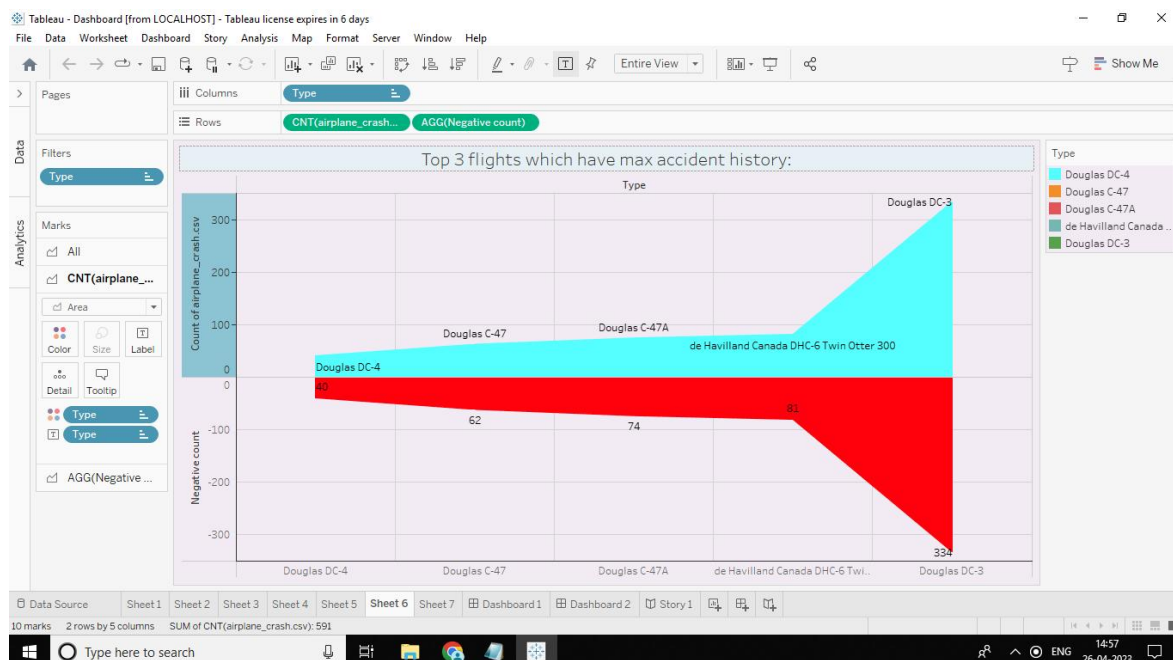
Top 10 location with the highest accidents:

This graph shows the top 10 locations where the highest number of accidents took place. Here, there are more locations from the continents of America (i.e.) The North America and the South America.



Top 3 Flights with highest accident history:

The Douglas DC-3 met with the highest number of accidents of all the aircrafts. This may indicate a technical defect in those Aircraft.



Accidents based on region :

The highest number of accidents took place over the Brazilian, Russian and Canadian airspace. This indicates the climate and metereological difficulties there.

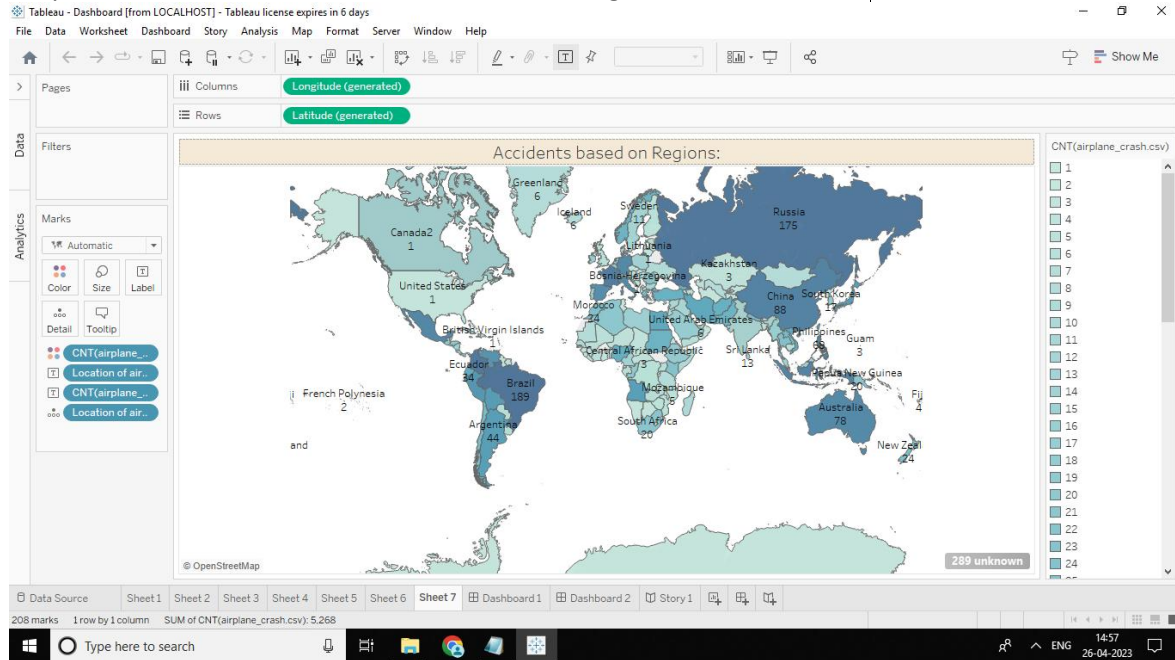
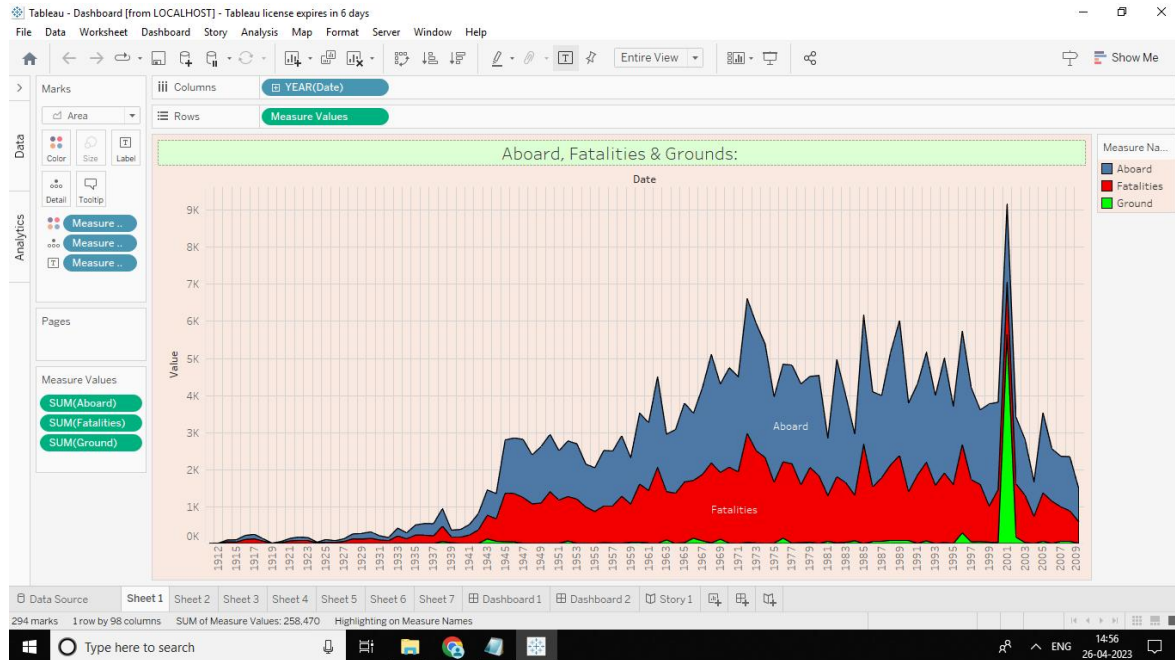
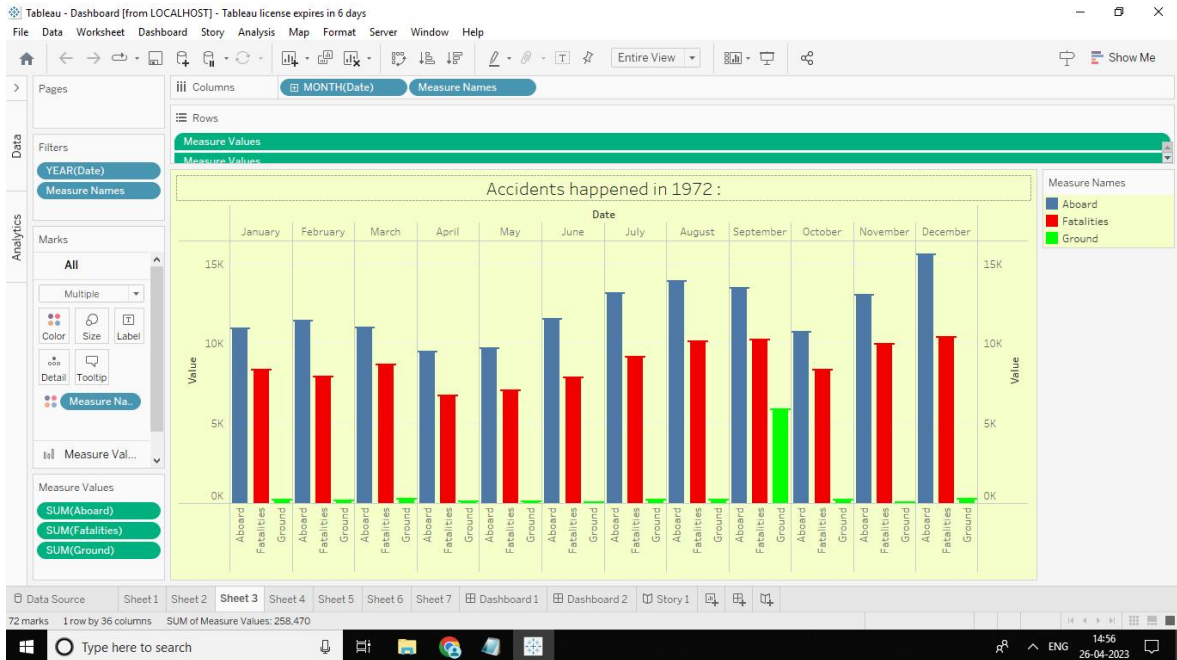
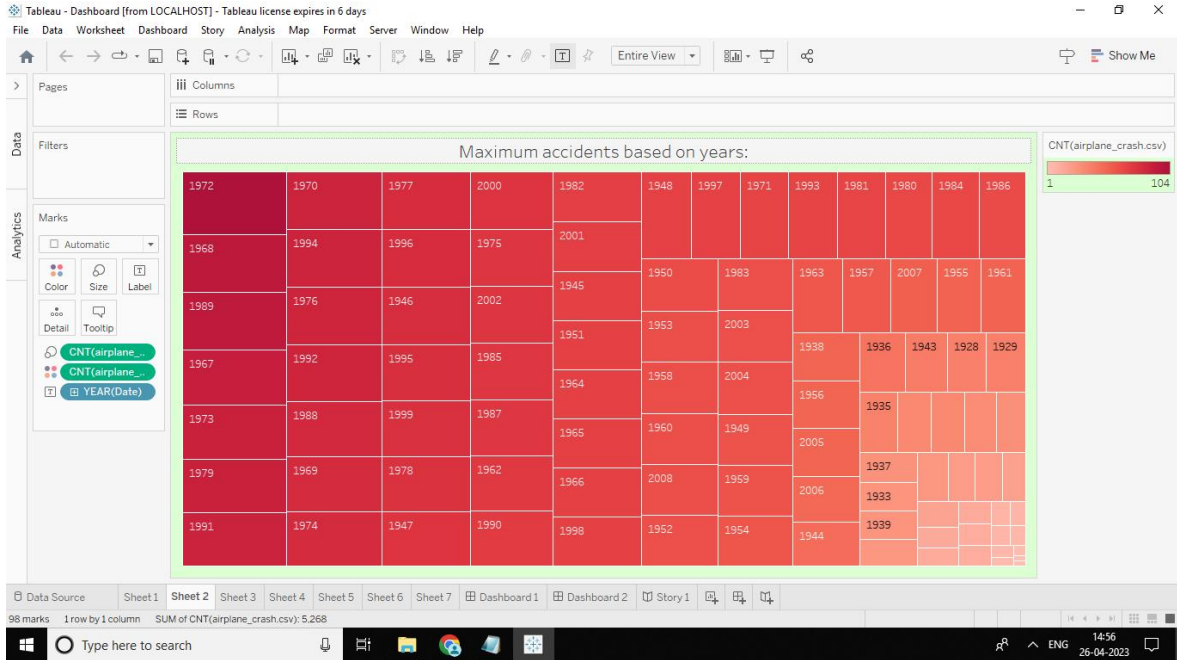
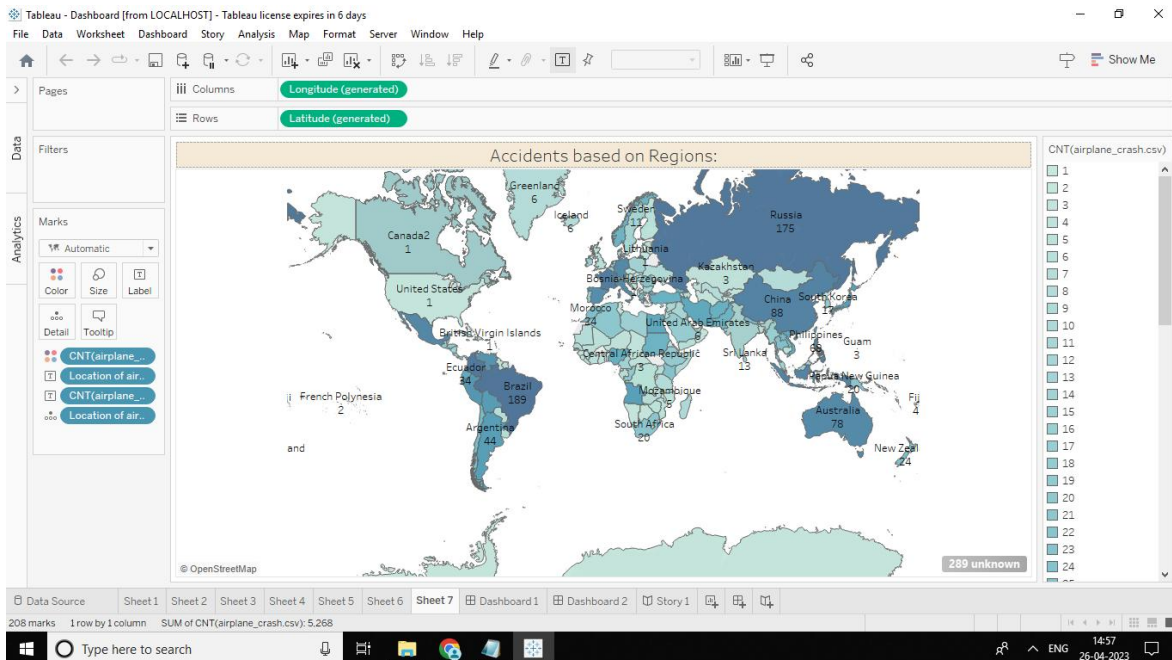
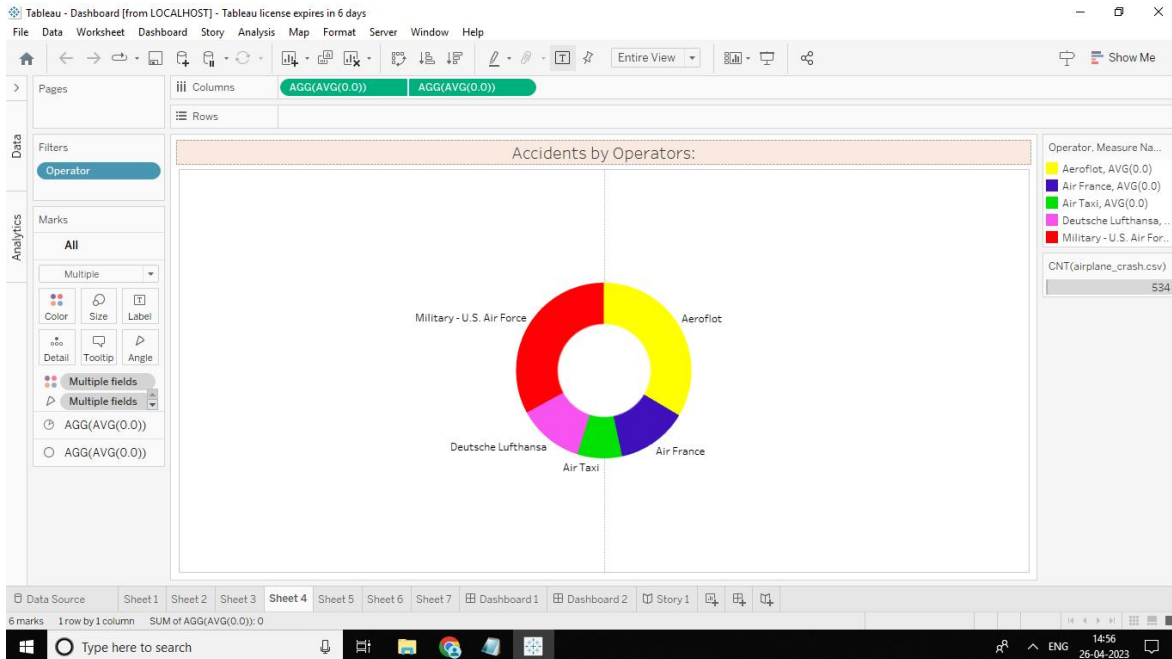


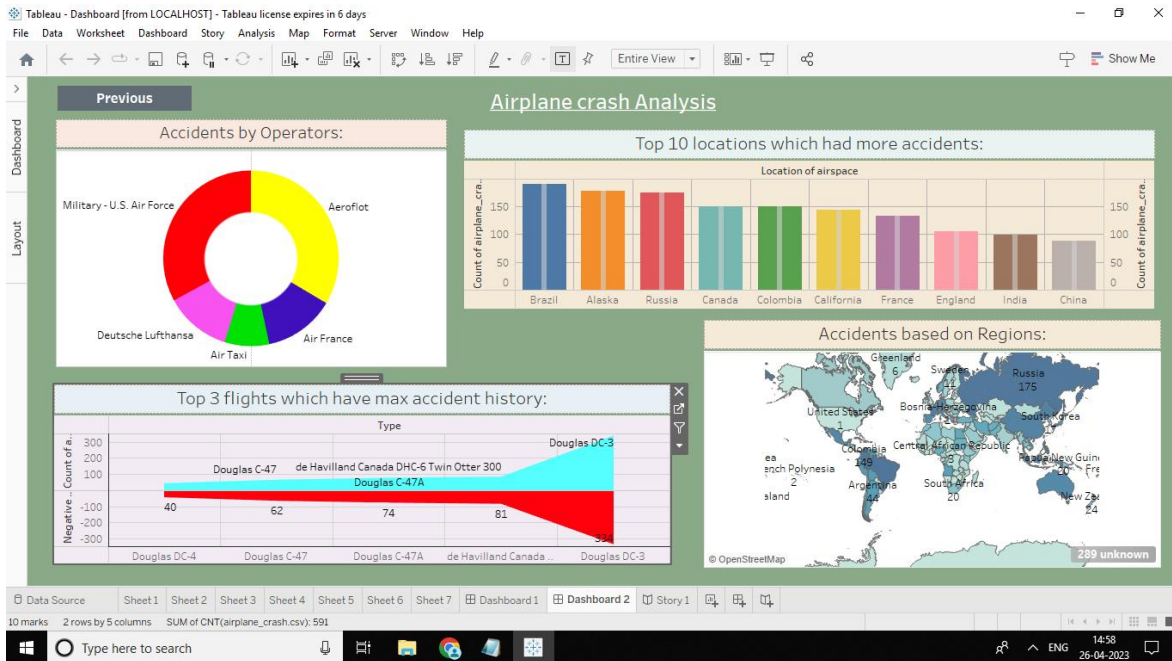
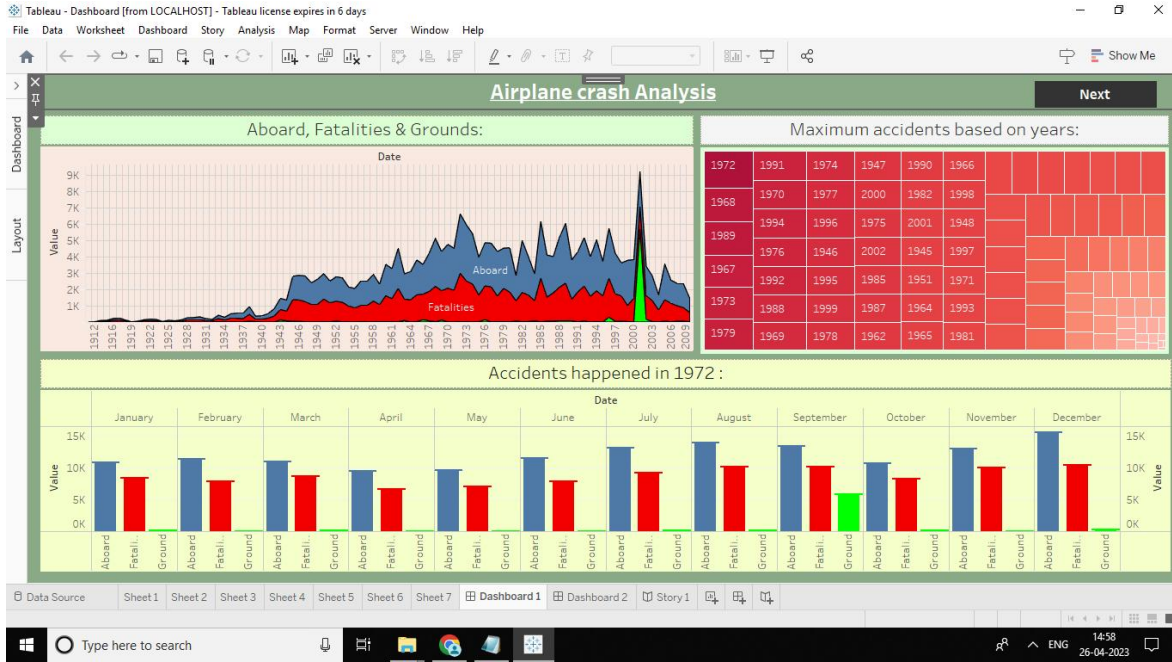
Tableau screenshots:



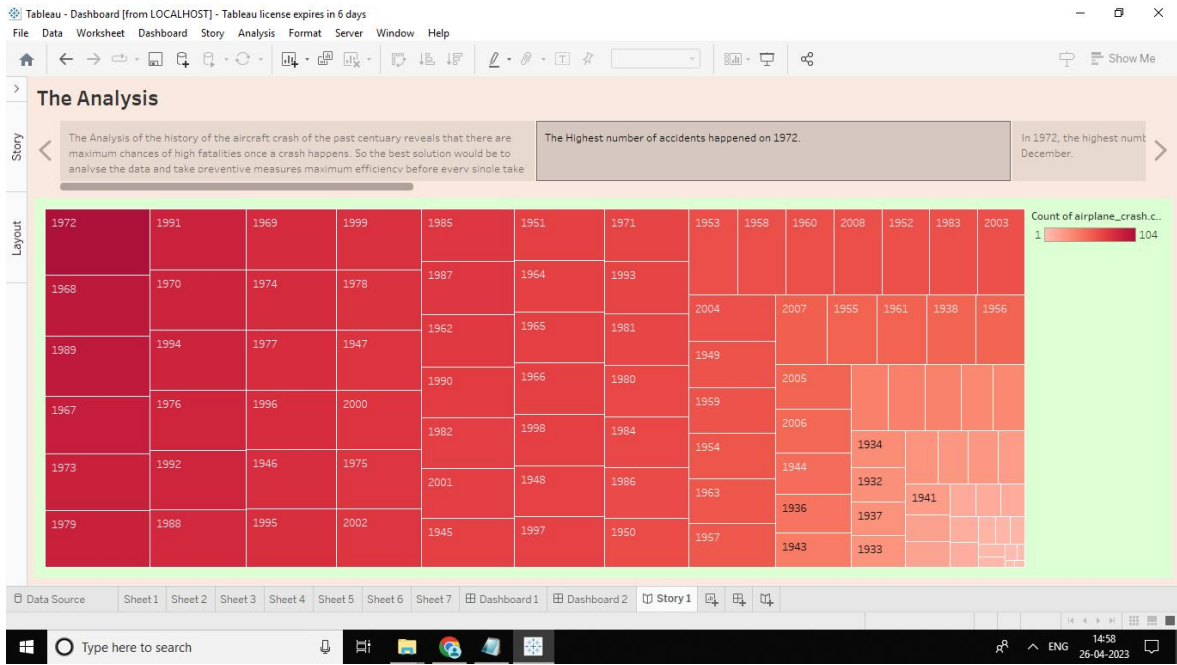
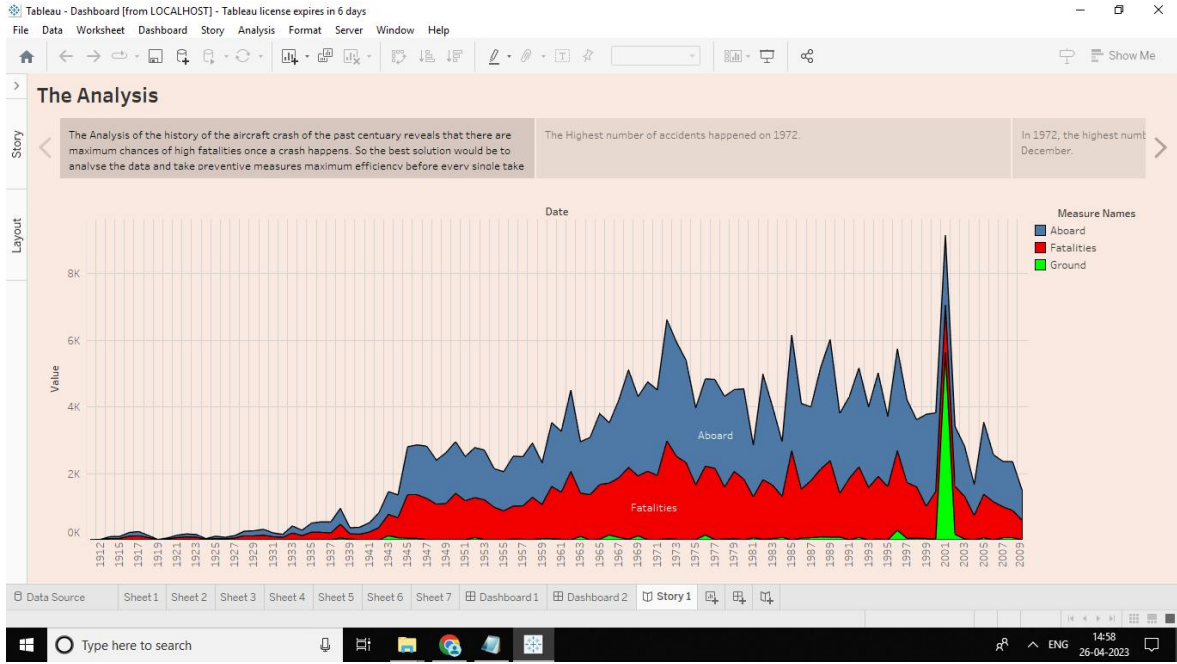


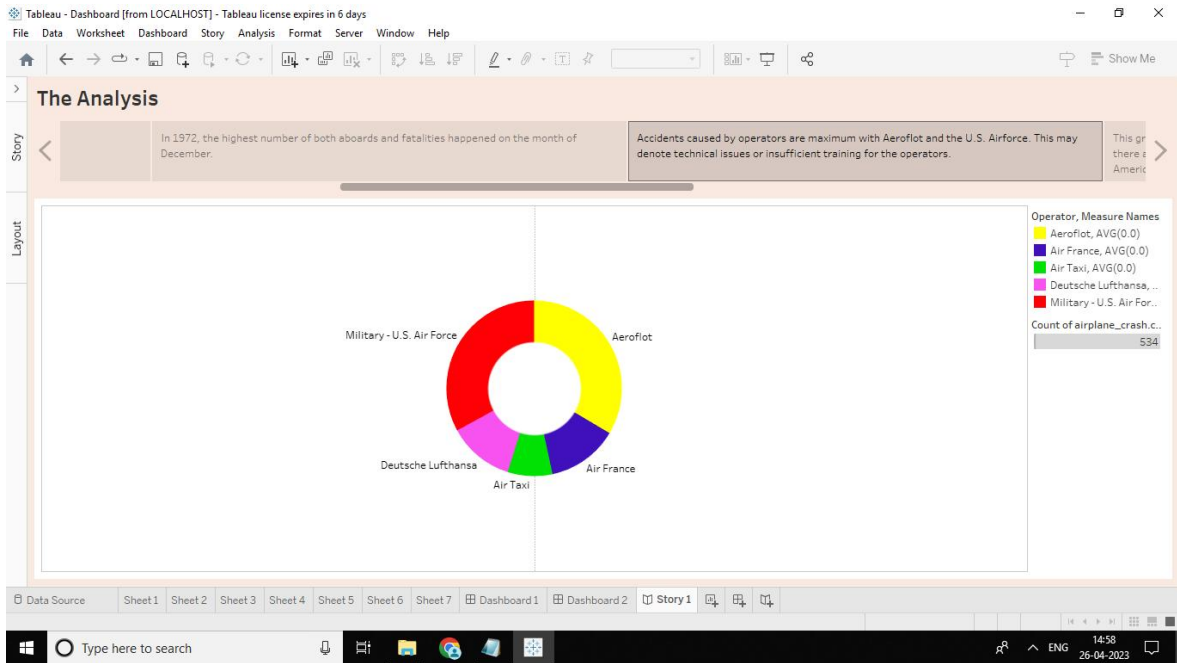
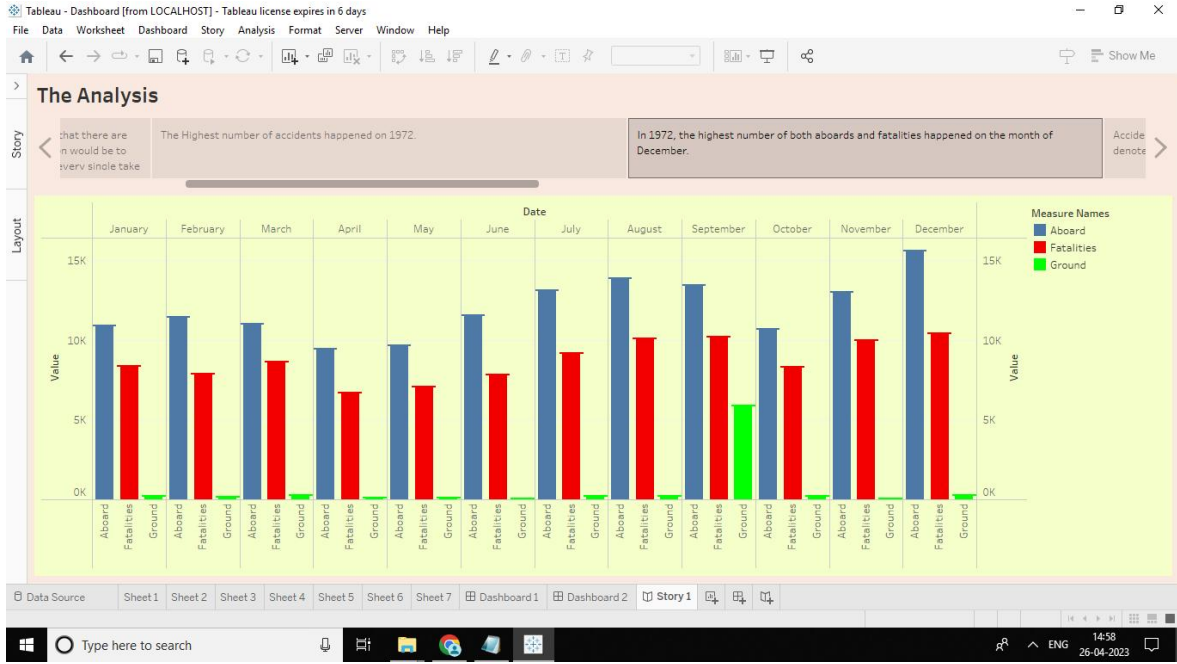


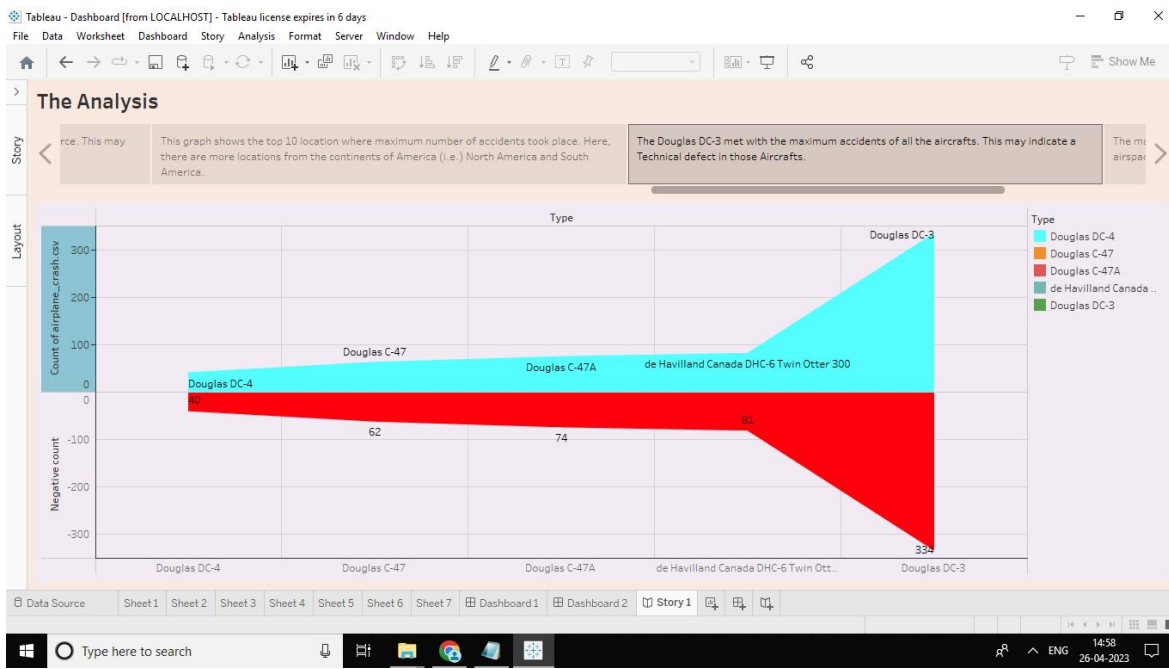
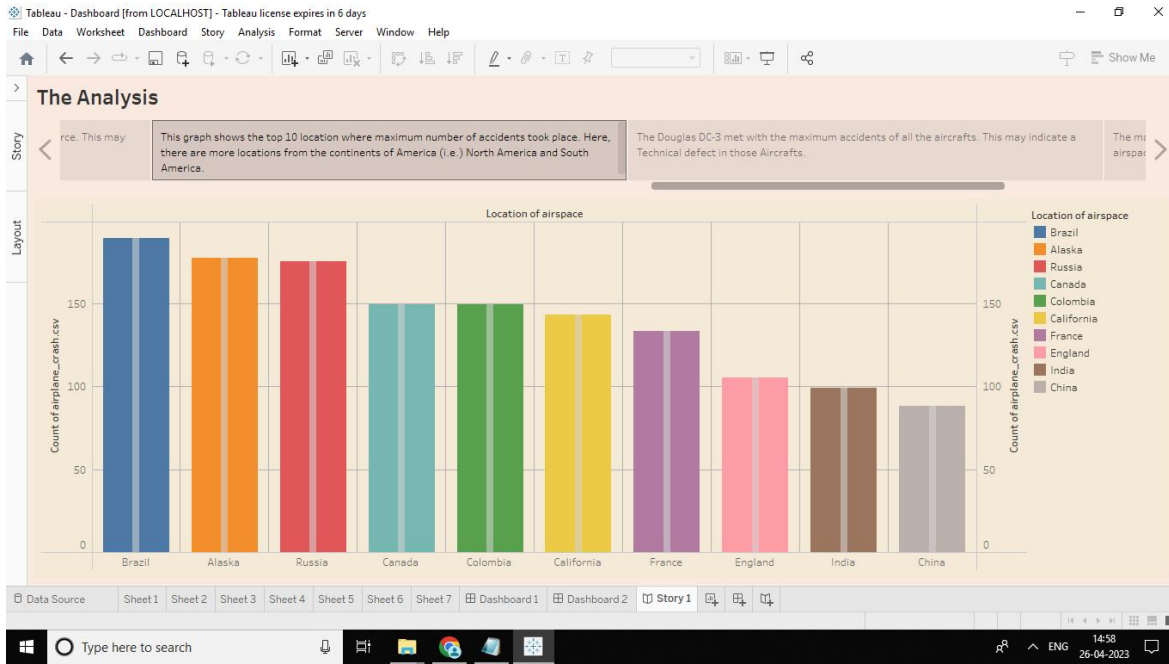
Dashboard:



Stories:







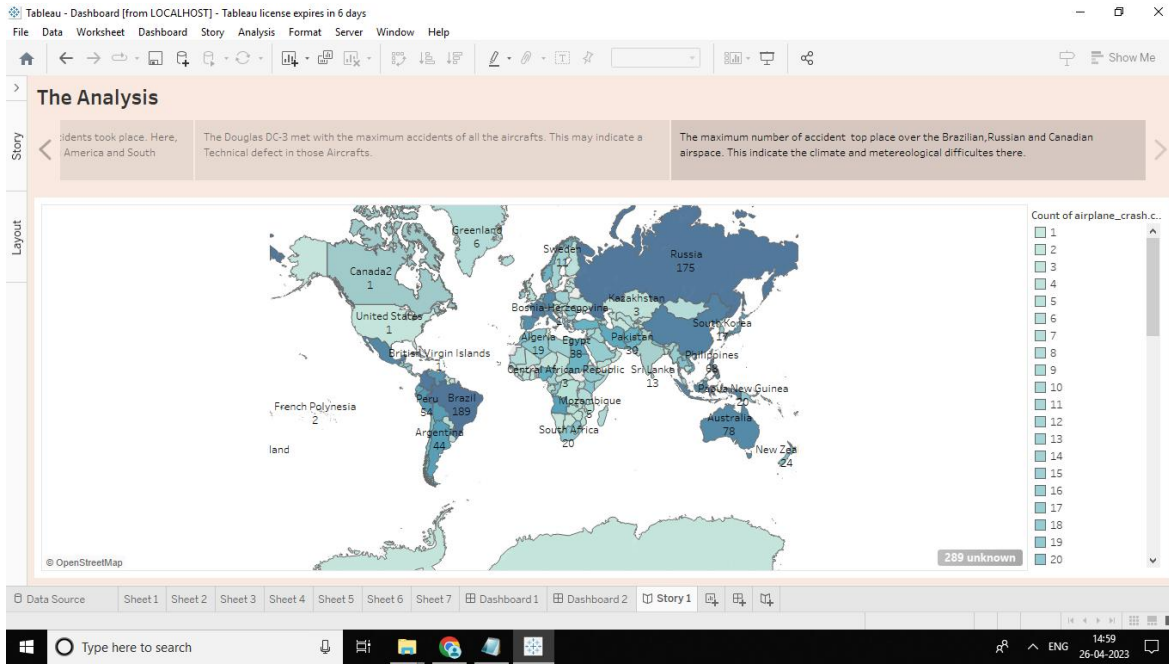
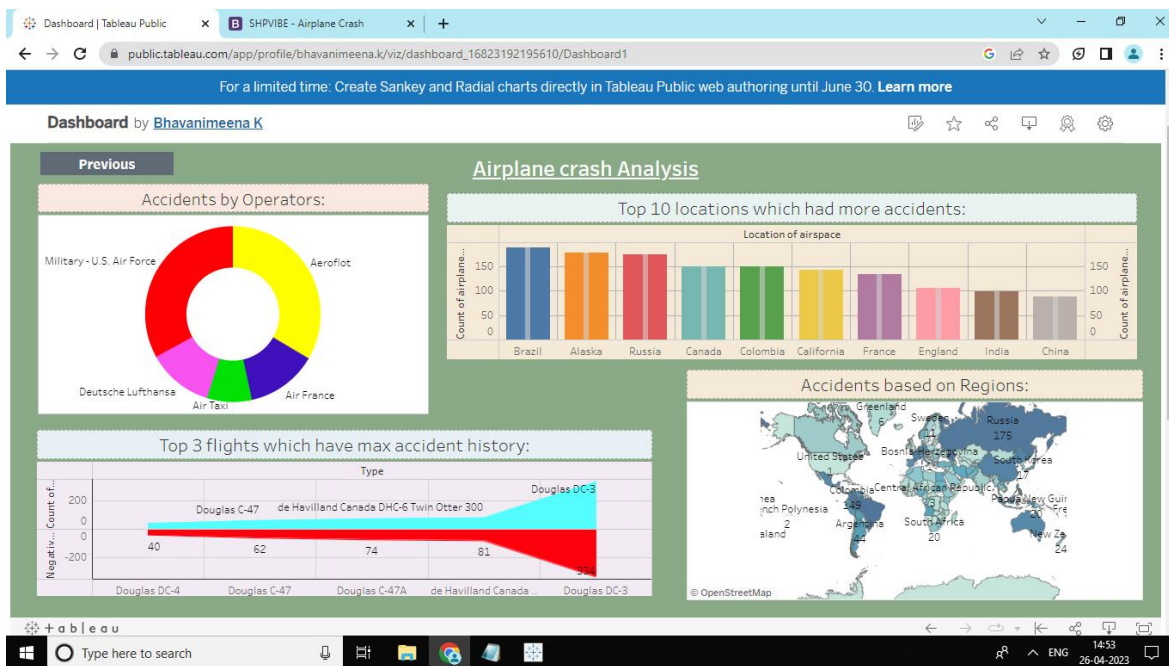
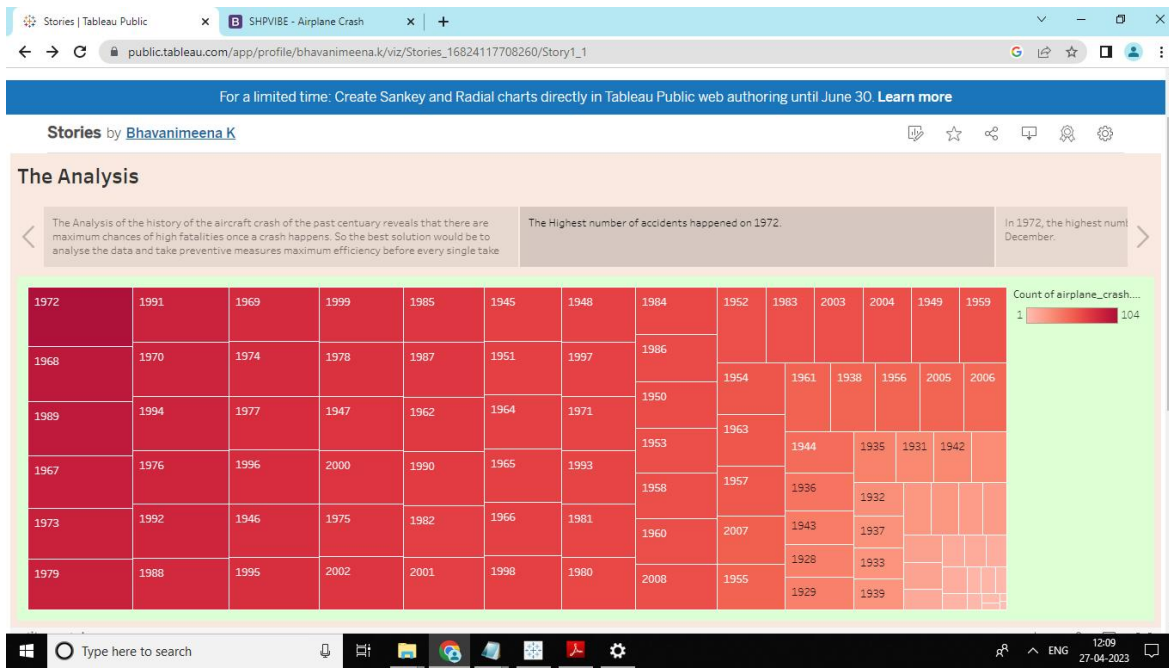
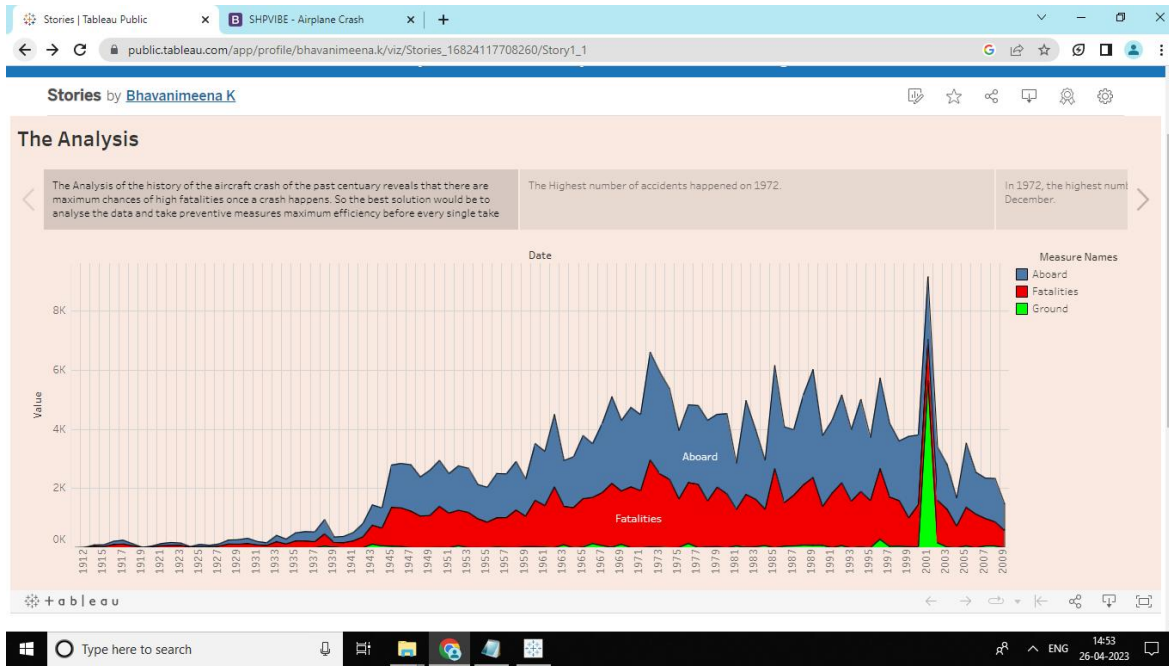


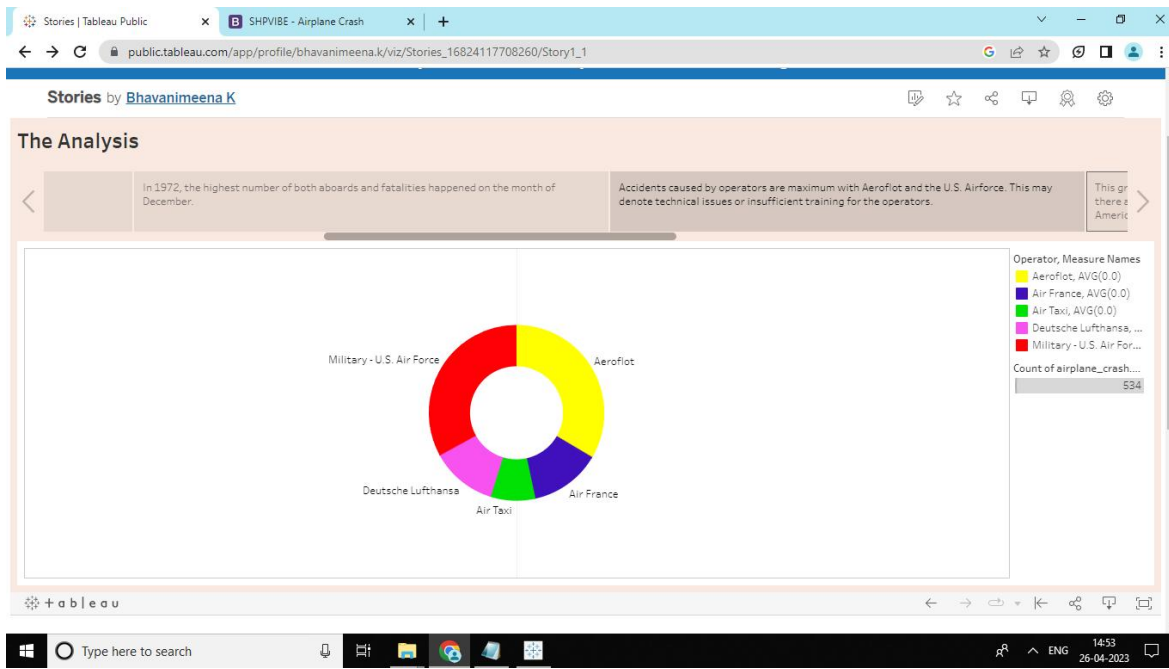
Tableau Published screenshots:

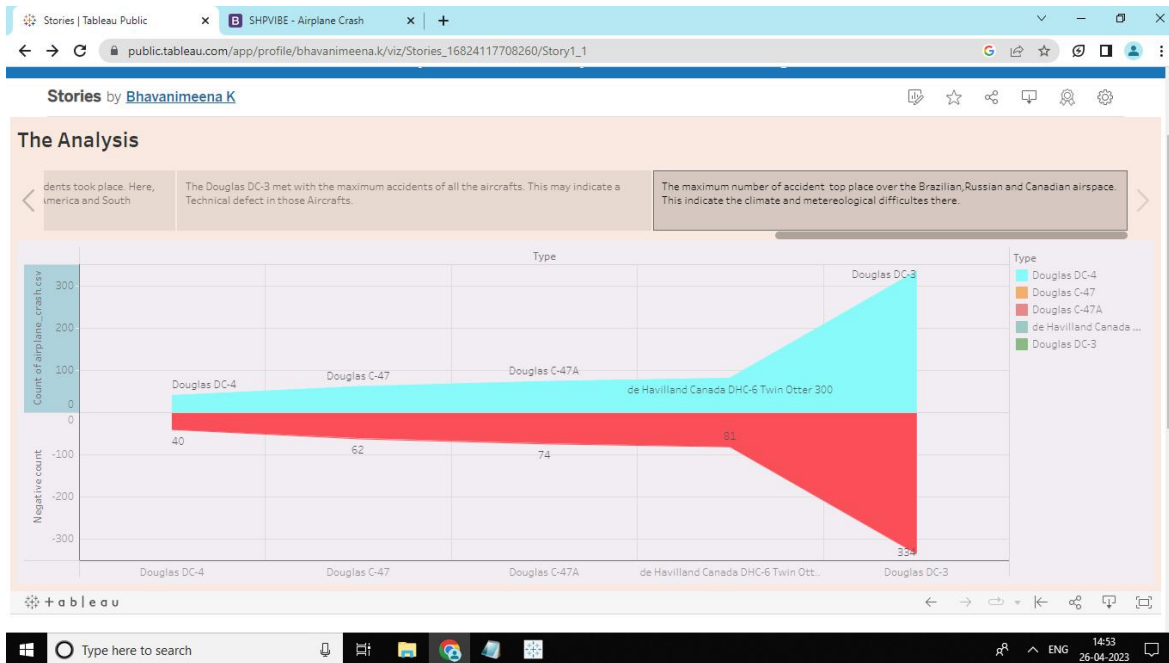
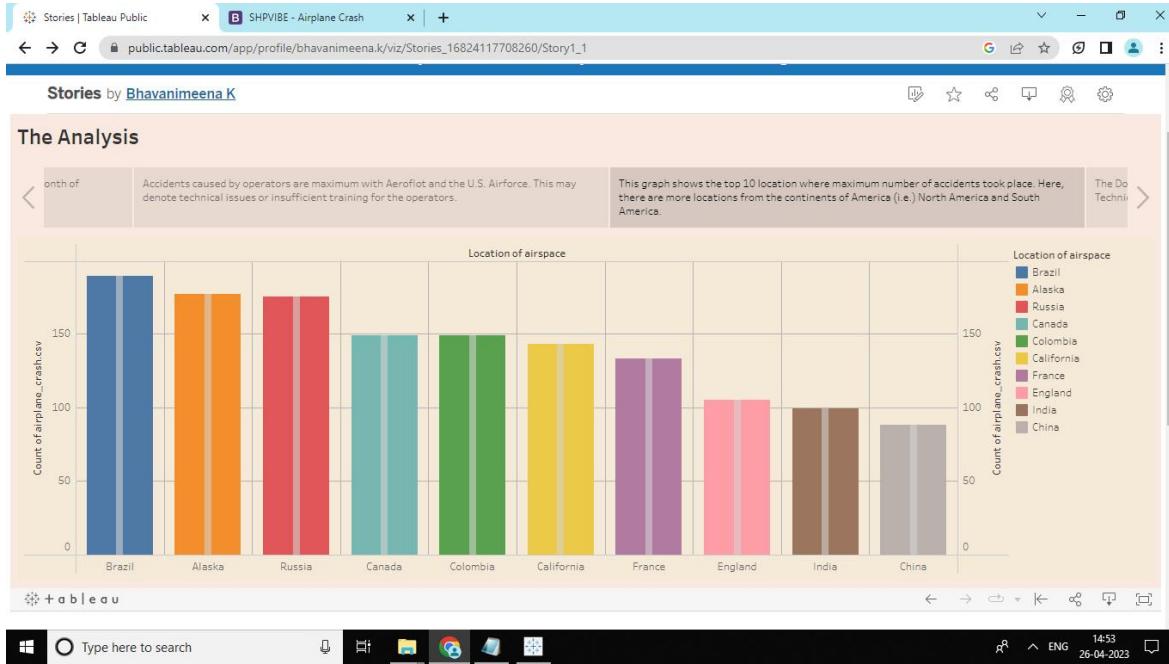
Dashboard

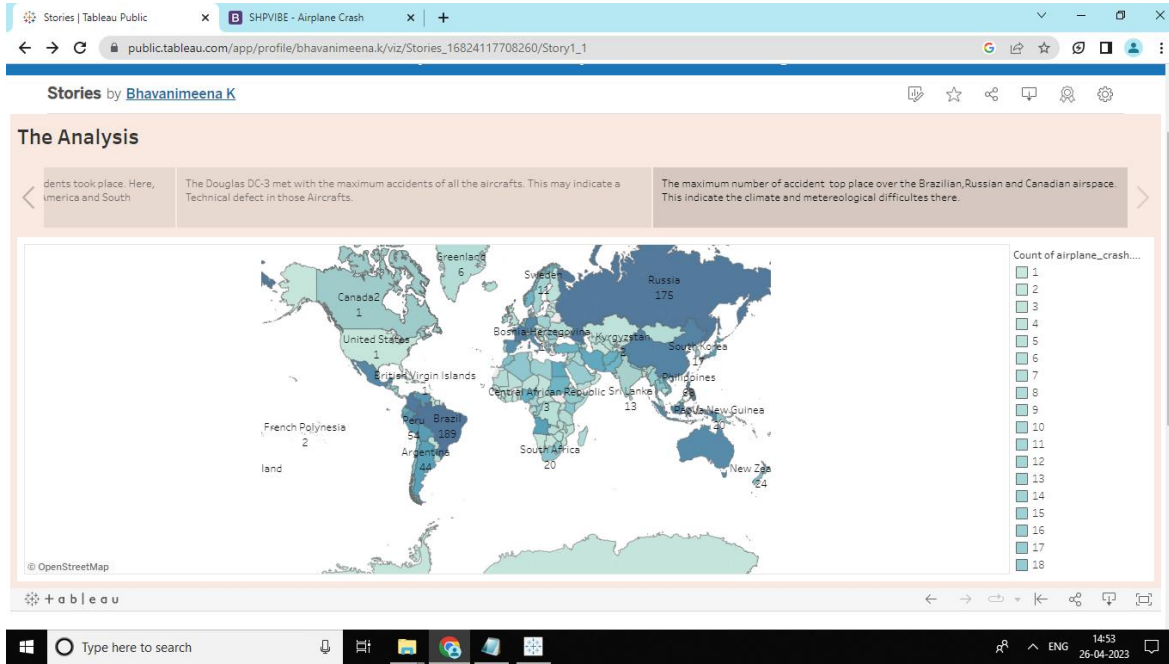


Stories:

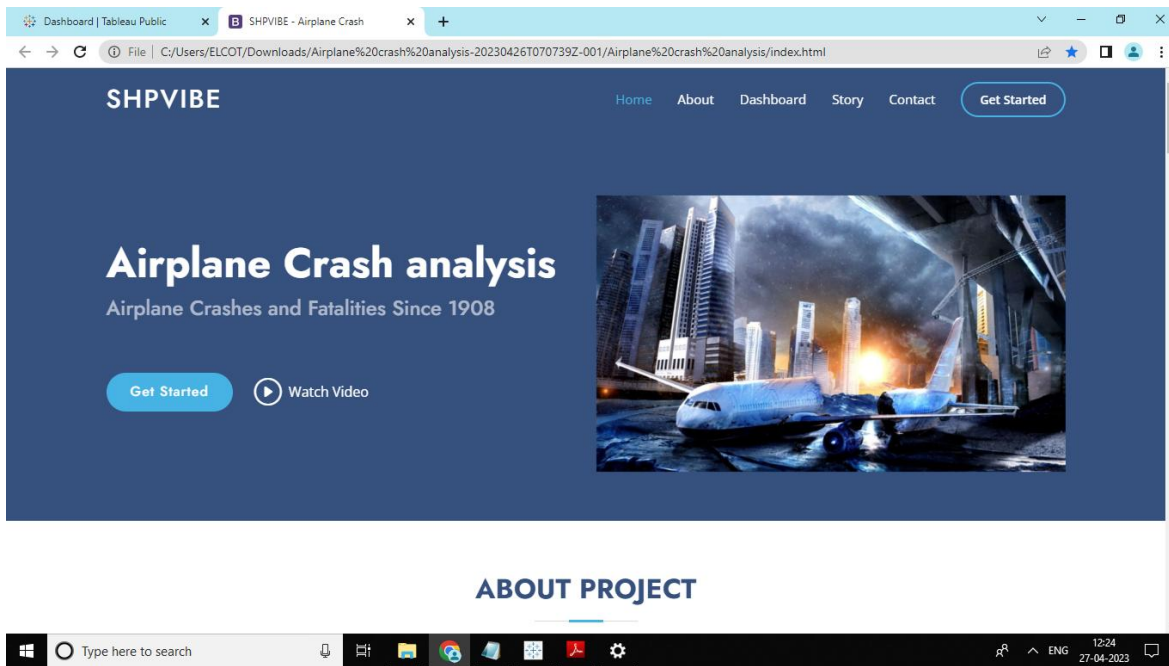








Final website screenshots:



Dashboard | Tableau Public
SHPVIBE - Airplane Crash

File | C:/Users/ELCOT/Downloads/Airplane%20crash%20analysis-20230426T070739Z-001/Airplane%20crash%20analysis/index.html

SHPVIBE
Home About Dashboard Story Contact Get Started

ABOUT PROJECT

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, and in which

- a) a person is fatally or seriously injured,
- b) the aircraft sustains significant damage or structural failure, or
- c) the aircraft goes missing or becomes completely inaccessible.

This dataset includes:

- All civil and commercial aviation accidents of scheduled and non-scheduled passenger airliners worldwide, which resulted in a fatality (including all U.S. Part 121 and Part 135 fatal accidents)
- All cargo, positioning, ferry and test flight fatal accidents.
- All military transport accidents with 10 or more fatalities.
- All commercial and military helicopter accidents with greater than 10 fatalities.
- All civil and military airship accidents involving fatalities.
- Aviation accidents involving the death of famous people.

Type here to search

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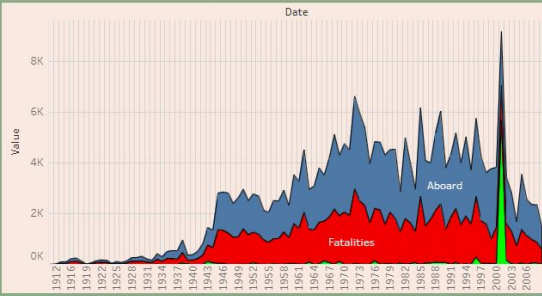
Dashboard | Tableau Public
SHPVIBE - Airplane Crash

File | C:/Users/ELCOT/Downloads/Airplane%20crash%20analysis-20230426T070739Z-001/Airplane%20crash%20analysis/index.html

SHPVIBE
Home About Dashboard Story Contact Get Started

Airplane crash Analysis

Aboard, Fatalities & Grounds:



Maximum accidents based on years:

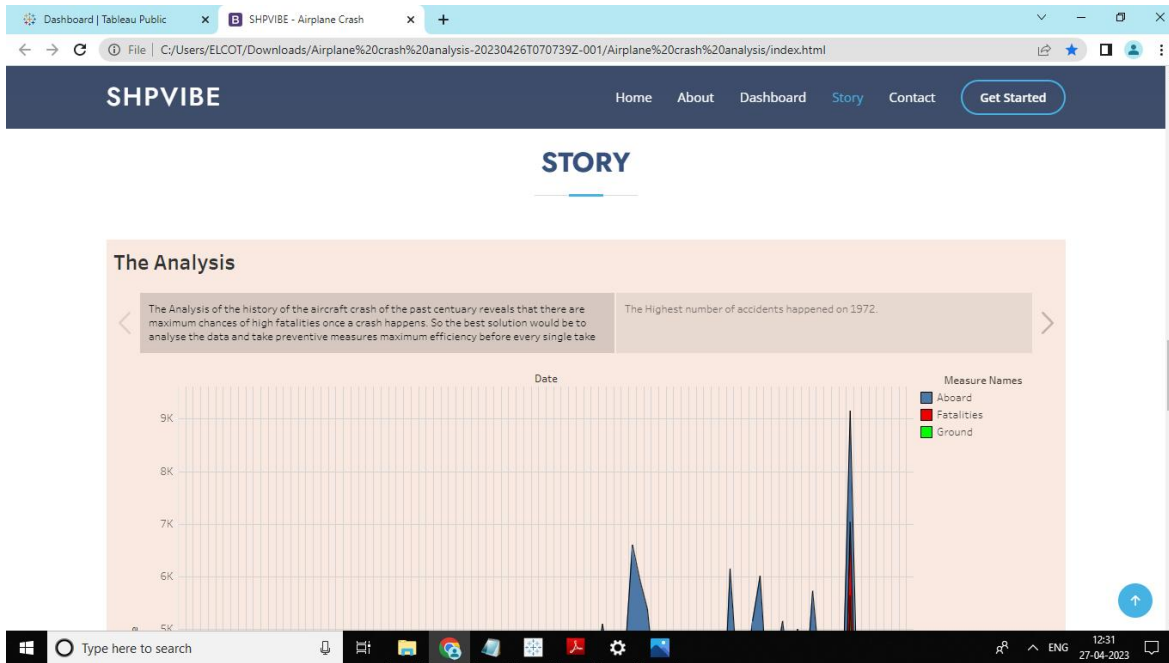
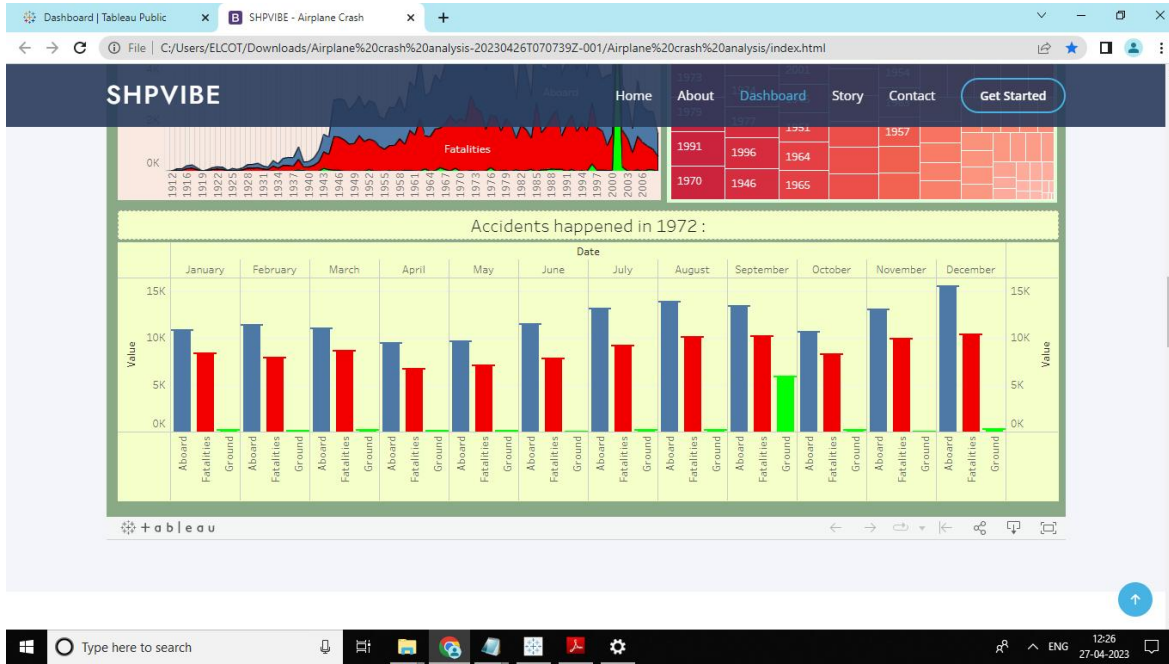
1972	1994		
1968	1976		
1989	1992	1962	
1967	1988	1990	
1973	1969	1982	
1979	1974	2001	1954
1991	1977	1945	1963
1970	1996	1951	1957
	1964	1964	
	1946	1965	

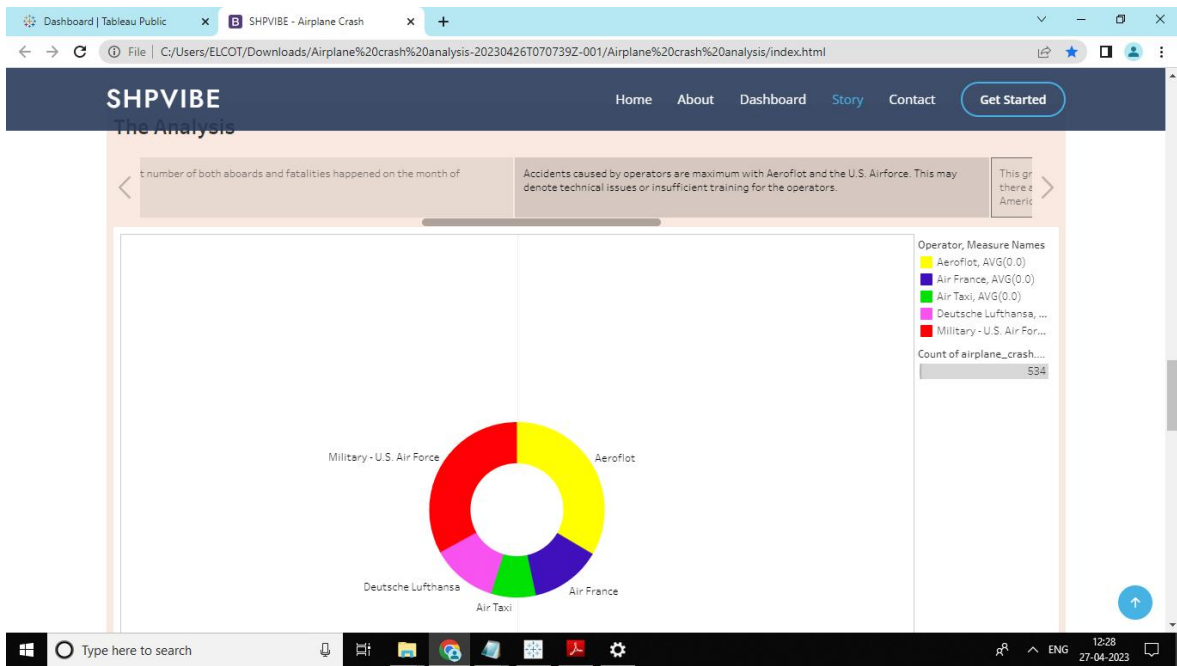
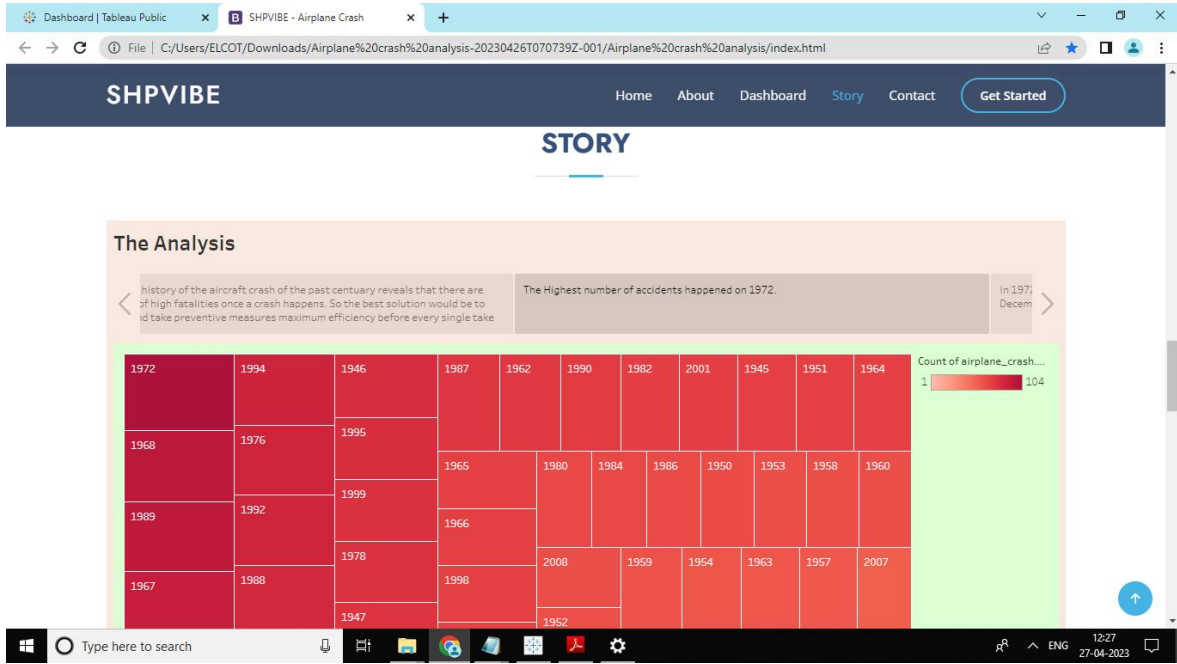
Accidents happened in 1972 :

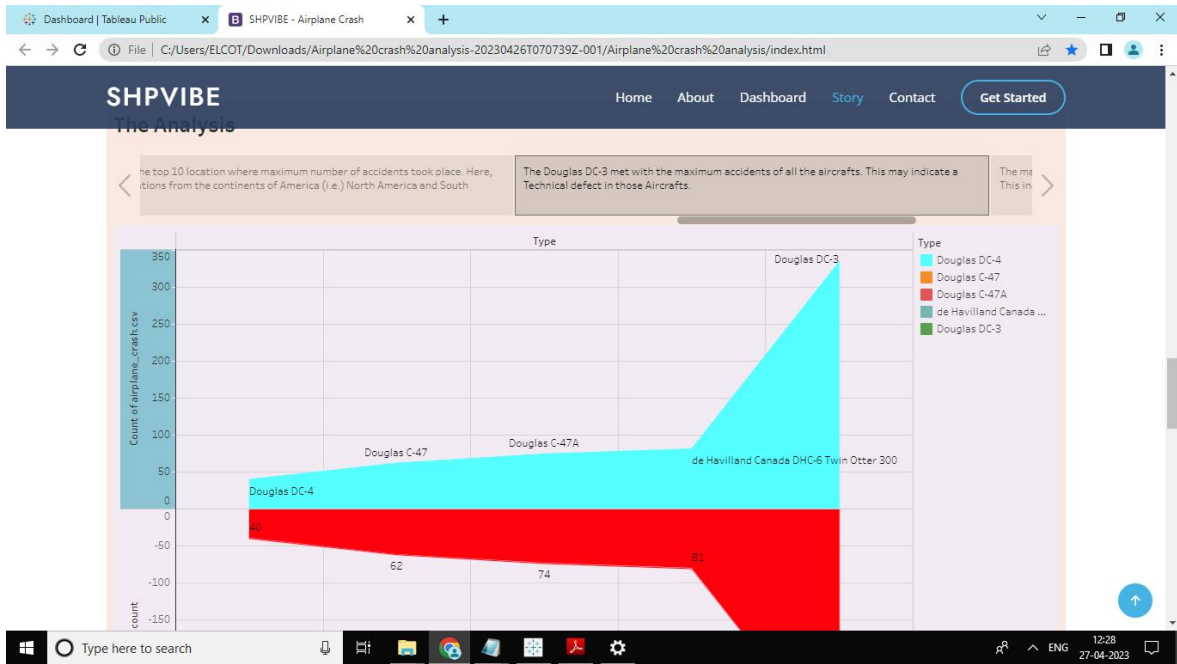
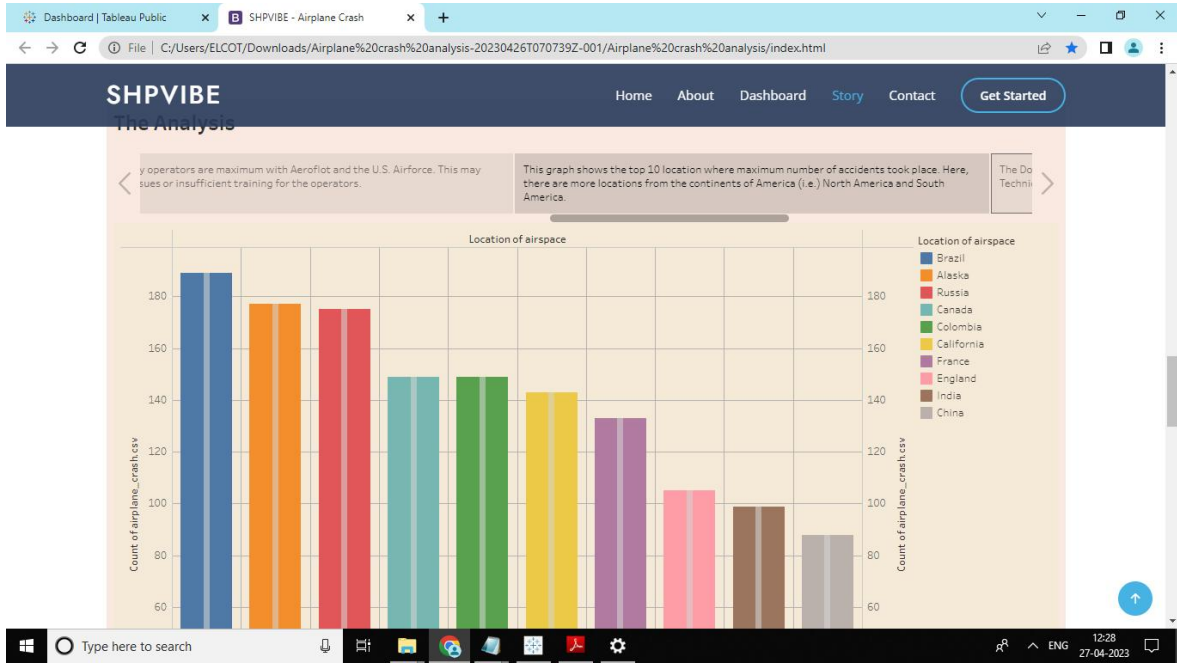
January	February	March	April	May	June	July	August	September	October	November	December

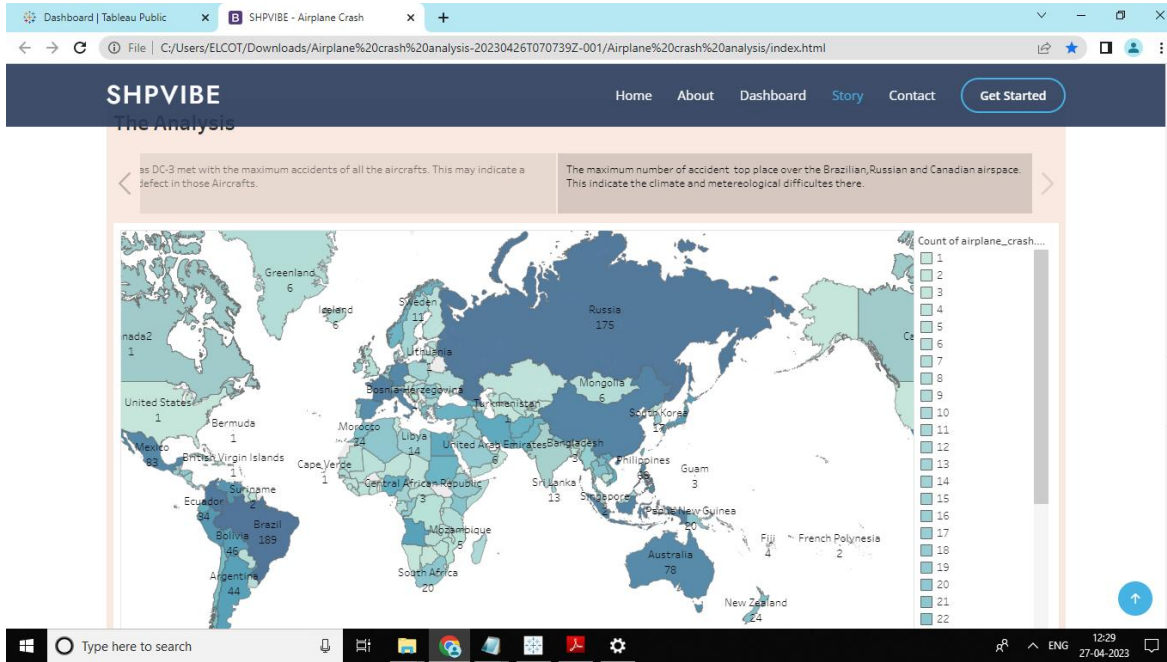
Type here to search

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4 ADVANTAGES & DISADVANTAGES

List of advantages and disadvantages of the proposed solution

Advantages:

- The range of boards, fatalities and ground are easily identifiable through decades.
- The finding of the highest number of accidents in a year helps us sort out the root causes.
- The finding of the highest number of accidents happened in that year based on months helps us gain detailed insights.
- Analysing the accidents caused by the operators helps us find which operators needs more training or which to find out if the flight handled by them have some technical issues
- Analysing the accidents based on the regions gives us the insights to do more research on the weather and meteorological aspects before takeoffs.
- The analysis of the particular flights causing more accidents helps us find the

technical issues in those aircrafts.

Disadvantages:

- *It would be great to have even more data collected and analysed to take data-driven decisions.*
- *Insights from the passengers who grounded safely after the accidents might be helpful.*
- *Data of the air routes where the accidents happened will give us more detailed insights*

4 APPLICATIONS

The areas where this solution can be applied

- Researching more meteorological effects.
- Technical aspects of the aircrafts.
- Training for the pilots.
- Safety checks before takeoffs
- Finding the right air routes.

5 CONCLUSION

This analysis gives us enough details to find the insights of the Aircraft crashes and implement preventive measures accordingly. This helps us take actions specifically without wasting time, money and effort. It reduce fatalities and ensures safe landing and builds up passengers, pilots, crews trust on the aviation industries.

6 FUTURE SCOPE

Enhancements that can be made in the future.

- *Betterment of technical aspects of the defective aircrafts.*
- *Improving training for the operators.*
- *Finding better air routes.*
- *Reducing human errors with effective measures.*
- *Improving the aerodynamics of the aircrafts by conducting researches more often.*

- *Asking for the Passengers, Pilots ,crews feedbacks more often and implementing changes accordingly.*

7 APPENDIX

A. Source Code

Attach the code for the solution built.

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>SHPVIBE - Airplane Crash</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link
href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i,700,700i|Jost:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,400,400i,500,500i,600,600i,700,700i" rel="stylesheet">

  <!-- Vendor CSS Files -->
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css" rel="stylesheet">
  <link href="assets/vendor/boxicons/css/boxicons.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="assets/vendor/remixicon/remixicon.css" rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">

  <!-- Template Main CSS File -->
  <link href="assets/css/style.css" rel="stylesheet">

  <!-- =====
  * Template Name: Arsha - v4.9.1
  * Template URL: https://bootstrapmade.com/arsha-free-bootstrap-html-template-corporate/
  * Author: BootstrapMade.com
```

```

* License: https://bootstrapmade.com/license/
===== -->
</head>

<body>

<!-- ===== Header ===== -->
<header id="header" class="fixed-top ">
  <div class="container d-flex align-items-center">

    <h1 class="logo me-auto"><a href="index.html">SHPVIBE</a></h1>
    <!-- Uncomment below if you prefer to use an image logo -->
    <!-- <a href="index.html" class="logo me-auto"></a>-->

    <nav id="navbar" class="navbar">
      <ul>
        <li><a class="nav-link scrollto active" href="#hero">Home</a></li>
        <li><a class="nav-link scrollto" href="#about">About</a></li>

        <li><a class="nav-link scrollto" href="#team">Dashboard</a></li>

        <li><a class="nav-link scrollto" href="#pricing">Story</a></li>

        <li><a class="nav-link scrollto" href="#contact">Contact</a></li>
        <li><a class="getstarted scrollto" href="#about">Get Started</a></li>
      </ul>
      <i class="bi bi-list mobile-nav-toggle"></i>
    </nav><!-- .navbar -->

  </div>
</header><!-- End Header -->

<!-- ===== Hero Section ===== -->
<section id="hero" class="d-flex align-items-center">

  <div class="container">
    <div class="row">
      <div class="col-lg-6 d-flex flex-column justify-content-center pt-4 pt-lg-0 order-2 order-lg-1"
data-aos="fade-up" data-aos-delay="200">
        <h1>Airplane Crash analysis</h1>
        <h2>Airplane Crashes and Fatalities Since 1908</h2>
        <div class="d-flex justify-content-center justify-content-lg-start">
          <a href="#about" class="btn-get-started scrollto">Get Started</a>
          <a href="https://www.youtube.com/@thesmartbridge/videos" class="lightbox btn-watch-
video"><i class="bi bi-play-circle"></i><span>Watch Video</span></a>
        </div>
      </div>
      <div class="col-lg-6 order-1 order-lg-2 hero-img" data-aos="zoom-in" data-aos-delay="200">
        
      </div>
    </div>
  </div>

```



```
</div>
</div>

</section><!-- End Hero -->

<main id="main">
  <!-- ===== About Us Section ===== -->
  <section id="about" class="about">
    <div class="container" data-aos="fade-up">

      <div class="section-title">
        <h2>About Project</h2>
      </div>

      <div class="row content">
        <div class="col-lg-6">
          <p>
            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, and
            in which
          </p>
          <ul>
            <li><i class="ri-check-double-line"></i> a) a person is fatally or seriously injured, </li>
            <li><i class="ri-check-double-line"></i> b) the aircraft sustains significant damage or
            structural failure, or </li>
            <li><i class="ri-check-double-line"></i> c) the aircraft goes missing or becomes completely
            inaccessible.</li>
          </ul>
        </div>
        <div class="col-lg-6 pt-4 pt-lg-0">
          <p>
            This dataset includes:
          </p>
          <ul>
            <li><i class="ri-check-double-line"></i> All civil and commercial aviation accidents of
            scheduled and non-scheduled passenger airliners worldwide, which resulted in a fatality (including
            all U.S. Part 121 and Part 135 fatal accidents)</li>
            <li><i class="ri-check-double-line"></i> All cargo, positioning, ferry and test flight fatal
            accidents.</li>
            <li><i class="ri-check-double-line"></i> All military transport accidents with 10 or more
            fatalities.</li>
            <li><i class="ri-check-double-line"></i> All commercial and military helicopter accidents
            with greater than 10 fatalities.</li>
            <li><i class="ri-check-double-line"></i> All civil and military airship accidents involving
            fatalities.</li>
            <li><i class="ri-check-double-line"></i> Aviation accidents involving the death of famous
            people.</li>
          </ul>
        </div>
      </div>
    </div>
  </div>
</main>
```

```

</div>
</section><!-- End About Us Section -->

<!-- ===== Cta Section ===== -->
<section id="cta" class="cta">
  <div class="container" data-aos="zoom-in">

    <div class="row">
      <div class="col-lg-9 text-center text-lg-start">
        <h3>Call To Action</h3>
      </div>
      <div class="col-lg-3 cta-btn-container text-center">
        <a class="cta-btn align-middle" href="#">Call To Action</a>
      </div>
    </div>

  </div>
</section><!-- End Cta Section -->

<!-- ===== Team Section ===== -->
<section id="team" class="team section-bg">
  <div class="container" data-aos="fade-up">

    <div class="section-title">
      <h2>Dashboard</h2>
    </div>

    <div class='tableauPlaceholder' id='viz1671640028467' style='position: relative'><noscript><a
href='#'><img alt='Airplane Crash Analysis '
src='https://public.tableau.com/static/images/Ai/Airplane_Crash&
#47;Dashboard1&#47;1_rss.png' style='border: none' /></a></noscript><object class='tableauViz'
style='display:none;'><param name='host_url' value='https%3A%2F%2Fpublic.tableau.com%2F' />
<param name='embed_code_version' value='3' /> <param name='site_root' value='' /><param
name='name' value='Airplane_Crash&#47;Dashboard1' /><param name='tabs' value='no'
/><param name='toolbar' value='yes' /><param name='static_image'
value='https://public.tableau.com/static/images/Ai/Airplane_Crash
&#47;Dashboard1&#47;1.png' /> <param name='animate_transition' value='yes' /><param
name='display_static_image' value='yes' /><param name='display_spinner' value='yes' /><param
name='display_overlay' value='yes' /><param name='display_count' value='yes' /><param
name='language' value='en-US' /><param name='filter' value='publish=yes' /></object></div>
<script type='text/javascript'>
      var divElement =
document.getElementById('viz1671640028467');
      var vizElement =
divElement.getElementsByTagName('object')[0];
      if ( divElement.offsetWidth > 800 )
{ vizElement.style.width='100%';vizElement.style.height=(divElement.offsetWidth*0.75)+'px';}
else if ( divElement.offsetWidth > 500 )
{ vizElement.style.width='100%';vizElement.style.height=(divElement.offsetWidth*0.75)+'px';}
else { vizElement.style.width='100%';vizElement.style.height='1027px';}
      var
scriptElement = document.createElement('script');
      scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
vizElement.parentNode.insertBefore(scriptElement, vizElement);
    </script>
    </div>
  </section><!-- End Team Section -->

  <!-- ===== Pricing Section ===== -->

```

```

<section id="pricing" class="pricing">
  <div class="container" data-aos="fade-up">

    <div class="section-title">
      <h2>Story</h2>
    </div>

    <div class='tableauPlaceholder' id='viz1671640137789' style='position: relative'><noscript><a
href='#'><img alt='Story 1 '
src='https://public.tableau.com/static/images/Ai/Airplane_Crash_story/Story1/1_rss.png' style='border: none' /></a></noscript><object class='tableauViz'
style='display:none;'><param name='host_url' value='https%3A%2F%2Fpublic.tableau.com%2F' />
<param name='embed_code_version' value='3' /> <param name='site_root' value='' /><param
name='name' value='Airplane_Crash_story&#47;Story1' /><param name='tabs' value='no'
/><param name='toolbar' value='yes' /><param name='static_image'
value='https://public.tableau.com/static/images/Ai/Airplane_Crash_story&#47;Story1&#47;1.png' /> <param name='animate_transition' value='yes' /><param
name='display_static_image' value='yes' /><param name='display_spinner' value='yes' /><param
name='display_overlay' value='yes' /><param name='display_count' value='yes' /><param
name='language' value='en-US' /><param name='filter' value='publish=yes' /></object></div>
<script type='text/javascript'>          var divElement =
document.getElementById('viz1671640137789');          var vizElement =
divElement.getElementsByTagName('object')[0];
vizElement.style.width='100%';vizElement.style.height=(divElement.offsetWidth*0.75)+'px';
var scriptElement = document.createElement('script');          scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
vizElement.parentNode.insertBefore(scriptElement, vizElement);          </script>
    </div>
  </section><!-- End Pricing Section -->

<!-- ===== Contact Section ===== -->
<section id="contact" class="contact">
  <div class="container" data-aos="fade-up">

    <div class="section-title">
      <h2>Contact</h2>
    </div>

    <div class="row">

      <div class="col-lg-5 d-flex align-items-stretch">
        <div class="info">
          <div class="address">
            <i class="bi bi-geo-alt"></i>
            <h4>Location:</h4>
            <p>xxxxxx Street, xxx, xx 53xxx2</p>
          </div>

          <div class="email">
            <i class="bi bi-envelope"></i>
            <h4>Email:</h4>
            <p>info@example.com</p>
          </div>
        </div>
      </div>
    </div>
  </div>

```

</div>

```
<div class="phone">
  <i class="bi bi-phone"></i>
  <h4>Call:</h4>
  <p>+1 5xxx 5xxx8 5xs</p>
</div>
```

```
<iframe
src="https://www.google.com/maps/embed?pb=!1m14!1m8!1m3!1d12097.433213460943!2d-
74.0062269!3d40.7101282!3m2!1i1024!2i768!4f13.1!3m3!1m2!1s0x0%3A0xb89d1fe6bc499443!
2sDowntown+Conference+Center!5e0!3m2!1smk!2sbg!4v1539943755621" frameborder="0"
style="border:0; width: 100%; height: 290px;" allowfullscreen></iframe>
</div>
```

</div>

```
<div class="col-lg-7 mt-5 mt-lg-0 d-flex align-items-stretch">
<form action="forms/contact.php" method="post" role="form" class="php-email-form">
  <div class="row">
    <div class="form-group col-md-6">
      <label for="name">Your Name</label>
      <input type="text" name="name" class="form-control" id="name" required>
    </div>
    <div class="form-group col-md-6">
      <label for="name">Your Email</label>
      <input type="email" class="form-control" name="email" id="email" required>
    </div>
  </div>
  <div class="form-group">
    <label for="name">Subject</label>
    <input type="text" class="form-control" name="subject" id="subject" required>
  </div>
  <div class="form-group">
    <label for="name">Message</label>
    <textarea class="form-control" name="message" rows="10" required></textarea>
  </div>
  <div class="my-3">
    <div class="loading">Loading</div>
    <div class="error-message"></div>
    <div class="sent-message">Your message has been sent. Thank you!</div>
  </div>
  <div class="text-center"><button type="submit">Send Message</button></div>
</form>
</div>
```

</div>

```
</div>
</section><!-- End Contact Section -->
```

```
</main><!-- End #main -->
```

```
<!-- ===== Footer ===== -->
<footer id="footer">

<div class="footer-newsletter">
  <div class="container">
    <div class="row justify-content-center">
      <div class="col-lg-6">
        <h4>Join Our Newsletter</h4>

        <form action="" method="post">
          <input type="email" name="email"><input type="submit" value="Subscribe">
        </form>
      </div>
    </div>
  </div>
</div>

<div class="footer-top">
  <div class="container">
    <div class="row">

      <div class="col-lg-3 col-md-6 footer-links">
        <h4>Useful Links</h4>
        <ul>
          <li><i class="bx bx-chevron-right"></i> <a href="#hero">Home</a></li>
          <li><i class="bx bx-chevron-right"></i> <a href="#about">About</a></li>
          <li><i class="bx bx-chevron-right"></i> <a href="#portfolio">Charts</a></li>
          <li><i class="bx bx-chevron-right"></i> <a href="#team">Dashboard</a></li>
          <li><i class="bx bx-chevron-right"></i> <a href="#pricing">Story</a></li>
        </ul>
      </div>

      <div class="col-lg-3 col-md-6 footer-links">
        <h4></h4>
        <ul>

        </ul>
      </div>

      <div class="col-lg-3 col-md-6 footer-links">
        <h4></h4>
        <ul>

        </ul>
      </div>

      <div class="col-lg-3 col-md-6 footer-links">
        <h4>Our Social Networks</h4>

        <div class="social-links mt-3">
```



```
<a href="https://www.linkedin.com/in/hariprabu741/" class="linkedin"><i class="bx bxl-
linkedin"></i></a>
<a href="#" class="twitter"><i class="bx bxl-twitter"></i></a>
<a href="#" class="facebook"><i class="bx bxl-facebook"></i></a>
<a href="#" class="instagram"><i class="bx bxl-instagram"></i></a>
<a href="#" class="google-plus"><i class="bx bxl-skype"></i></a>

</div>
</div>

</div>
</div>
</div>

<div class="container footer-bottom clearfix">
<div class="copyright">
&copy; Copyright <strong><span>SHPVIBE</span></strong>. All Rights Reserved
</div>
<div class="credits">
<!-- All the links in the footer should remain intact. -->
<!-- You can delete the links only if you purchased the pro version. -->
<!-- Licensing information: https://bootstrapmade.com/license/ -->
<!-- Purchase the pro version with working PHP/AJAX contact form:
https://bootstrapmade.com/arsha-free-bootstrap-html-template-corporate/ -->
Designed by <a href="https://bootstrapmade.com/">SHPVIBE</a>
</div>
</div>
</footer><!-- End Footer -->

<div id="preloader"></div>
<a href="#" class="back-to-top d-flex align-items-center justify-content-center"><i class="bi bi-
arrow-up-short"></i></a>

<!-- Vendor JS Files -->
<script src="assets/vendor/aos/aos.js"></script>
<script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
<script src="assets/vendor/glightbox/js/glightbox.min.js"></script>
<script src="assets/vendor/isotope-layout/isotope.pkgd.min.js"></script>
<script src="assets/vendor/swiper/swiper-bundle.min.js"></script>
<script src="assets/vendor/waypoints/noframework.waypoints.js"></script>
<script src="assets/vendor/php-email-form/validate.js"></script>

<!-- Template Main JS File -->
<script src="assets/js/main.js"></script>

</body>

</html>
```

