# THE TRAGEDY OF FLIGHT A COMPREHENSIVE CRASH ANALYSIS

A Project Report Submitted in partial fulfillment of the requirement for the Award of the degree of

# BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING

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#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### **GIET ENGINEERING COLLEGE**

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#### 1. INTRODUCTION

#### 1.1 OVERVIEW

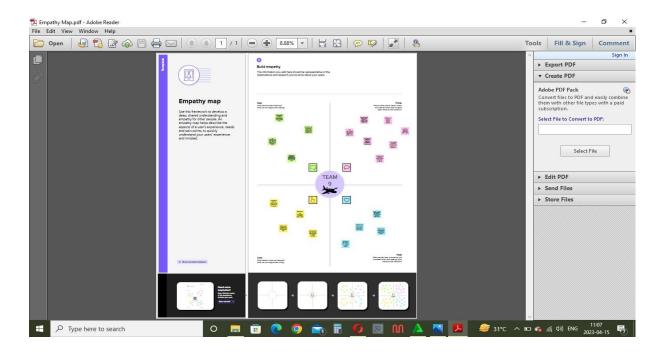
In this project, we do a Comprehensive Analysis, on flight accidents from 1908 to 2009.

#### 1.2 PURPOSE

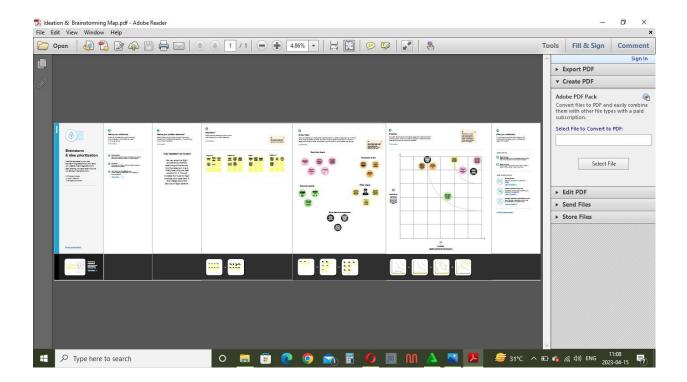
Our project is to analyze the data given which is helpful to find the causes for the flight accidents and to implement better solutions for the flight crash crisis.

#### 2. PROBLEM DEFINITION & DESIGN THINKING

### 2.1 Empathy Map

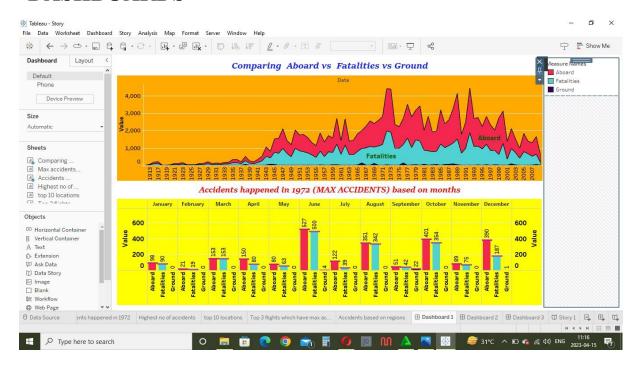


## 2.2 Ideation & Brainstorming Map

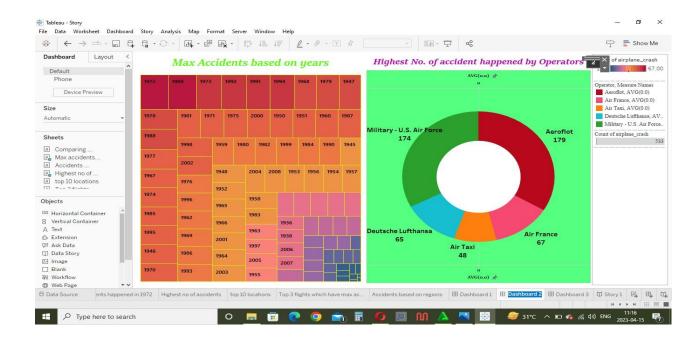


#### 3. RESULT

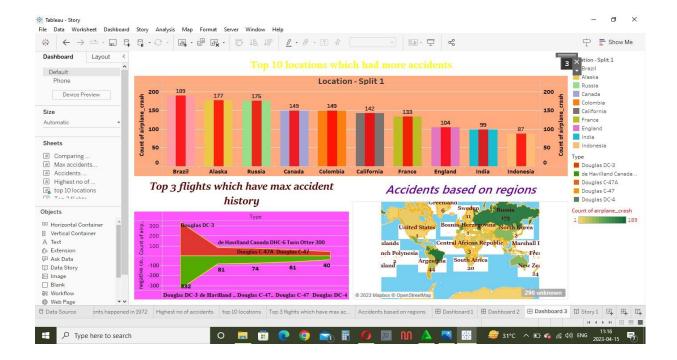
#### **DASHBOARDS**



#### Dashboard:1

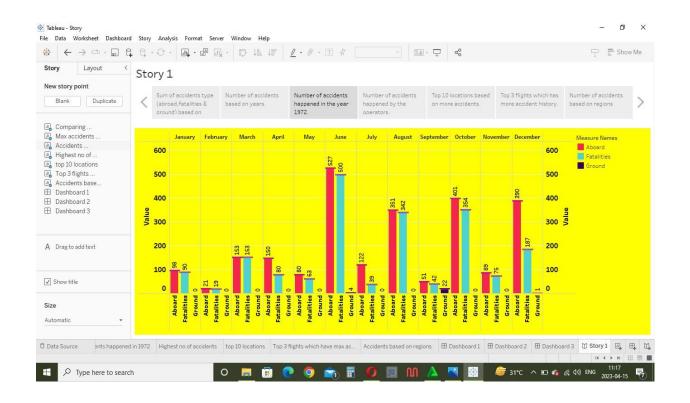


Dashboard:2

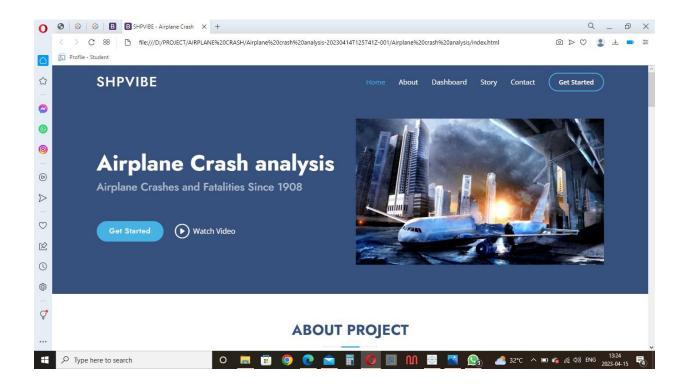


Dashboard:3

#### **STORY**



#### **WEB INTEGRATION**



#### 4. ADVANTAGES & DISADVANTAGES:

#### **4.1ADVANTAGES:**

- \* The final output of this project can give a detailed visualization about various different charts, which helps to understand the trends, causes, effects of various different factors.
- \* After the final interpretation of the result, we can reduce and prevent the future flight accidents by implementing necessary actions in the concerned sectors.

#### **4.2 DISADVANTAGES:**

The data was taken from 1908 to 2009, current years are not included.

#### 5. APPLICATIONS

The final output of this project can be utilized by researchers and investigators all over the globe who are trying to resolve problems associated with flight crashes.

#### 6. CONCLUSIONS

In this project, we found out \* Comparing Aboard vs Fatalities vs Ground, Maximum accidents based on years,

- \* Accidents happened in 1972 (maxmium accidents) basedon months,
- \* Highest no. of accidents happened by operators.
- \* Top 10 locations which had more accidents.
- \* Top 3 flights which have maximum accident history,
- \* Accidents based on regions, and visualized it in a simplified format in a chart for the easy understanding of the users.

#### 7. FUTURE SCOPE

- \* In this project, we have provided simplified visualization charts about various details of flight crash incidents all over the globe from 1908 to 2009.
- \* This analysis of the data will serve as a tool to find the solution for flight crashes and prevent further such tragedies.
- \* If more data information, various different statistics analysis is done, it will definitely help to pinpoint the exact problems and as a result, it will improve the safety of airlines and prevent flight crashes.

#### 8. APPENDIX

#### A. Source Code

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="utf-8">
 <meta content="width=device-width, initial-scale=1.0" name="viewport">
<title>SHPVIB
E - Airplane
Crash</title>
<meta
content=""
name="descript
ion">
 <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 -->
```

```
k 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/gli
 ghtbox.min.css"
                     rel="stylesheet">
 link
 href="assets/vendor/remixicon/remix"
 icon.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 -->
   <!--
                href="index.html"
                                     class="logo
                                                   me-auto"><img
          <a
src="assets/img/logo.png" alt="" class="img-fluid"></a>-->
   <nav id="navbar" class="navbar">
    <u1>
     <1i><a
                class="nav-link
scrollto
                        active"
href="#hero">Home</a>
<a class="nav-link scrollto"
href="#about">About</a>
     <a class="nav-link scrollto" href="#team">Dashboard</a>
     <a class="nav-link scrollto" href="#pricing">Story</a>
     <a class="nav-link scrollto" href="#contact">Contact</a>
     < a
                class="getstarted
                                    scrollto"
                                                href="#about">Get
Started</a>
    </u1>
    <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</pre>
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>
                 class="d-flex
      <div
justify-content-center justify-
content-lg-start">
href="#about" class="btn-get-
                 scrollto">Get
started
Started</a>
              href="https://www.youtube.com/@thesmartbridge/videos"
       <a
class="glightbox 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"</pre>
                          data-aos-delay="200">
data-aos="zoom-in"
<img src="assets/img/a1.jpg" class="img-fluid
animated" alt="">
  </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">
```

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

<ul>

<i class="ri-check-double-line"></i> a) a person is fatally or seriously injured,

<i class="ri-check-double-line"></i> b) the aircraft sustains
significant damage or structural failure, or

<i class="ri-check-double-line"></i> c) the aircraft goes
missing or becomes completely inaccessible.

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```

<div class="col-lg-6 pt-4 pt-lg-0">

>

>

This dataset includes:

<u1>

<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)

<i class="ri-check-double-line"></i> All cargo,
positioning, ferry and test flight fatal accidents.

<i class="ri-check-double-line"></i> All military
transport accidents with 10 or more fatalities.

<i class="ri-check-double-line"></i> All commercial
and military helicopter accidents with greater than 10 fatalities.

<i class="ri-check-double-line"></i> All civil and
military airship accidents involving fatalities.

class="ri-check-double-line"></i> Aviation accidents involving the death of famous people.

```
<
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  p
          </div>
       </div>
      </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='viz1681483374171'
style='position: relative'><noscript><a href='#'><img alt='Dashboard 1
src='https://public.tableau.com/static/images&#4
7;Da/Dashboard 16814810545520/Dashboard1/
            style='border:
                                  /></a></noscript><object
1 rss.png'
                           none'
class='tableauViz'
                 style='display:none;'><param name='host url'
value='https%3A%2F%2Fpublic.tableau.com%2F' />
name='embed code version' value='3' /> <param name='site root'
value="/>
<param
                                                  name='name'
value='Dashboard 16814810545520/Dashboard1'
                                                     /><param
name='tabs' value='no' />
<param name='toolbar' value='yes' /><param name='static image'</pre>
value='https://public.tableau.com/static/
images/Da/Dashboard 16814810545520/Dashboard1
/1.png' /> <param name='animate transition' value='yes' />
                                         <param</pre>
name='display static image'
                                  value='yes'
                                                     /><param
```

```
value='yes'
name='display spinner'
                                                                  />
             name='display overlay'
                                          value='yes'
                                                           /><param
<param
name='display count' value='yes' />
                                         <param name='language' value='en-</pre>
US'
       /><param
                    name='filter'
                                    value='publish=yes'
                                                           /></object></div>
<script type='text/javascript'>
                                                           var divElement =
document.getElementById('viz1681483374171');
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.offsetWidt
h*0.75)+'px';
                                                                         else
              vizElement.style.width='100%';vizElement.style.height='777px';}
            scriptElement
                                             document.createElement('script');
var
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="pricin
g">
   <div class="container" data-aos="fade-up">
```

```
<div class="section-title">
     <h2>Story</h2>
     </div>
     <div
              class='tableauPlaceholder'
                                           id='viz1681483729986'
style='position: relative'><noscript><a href='#'>
                                              1
<img
                     alt='Story
src='https://public.tableau.com/static/images&#4
7;St/Story 16814816765470/
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</pre>
name='embed_code version' value='3' />
           name='site root'
                             value="
<param
                                       /><param
                                                    name='name'
value='Story 16814816765470/Story1' /><param
                                                     name='tabs'
value='no' />
<param name='toolbar' value='yes' /><param name='static image'</pre>
value='https://
public.tableau.com/static/images/St/Story 16814
816765470/Story1/1.png' />
           name='animate transition'
                                        value='yes'
<param
                                                       /><param
name='display static image' value='yes' />
            name='display spinner'
                                       value='yes'
                                                       /><param
name='display overlay' value='yes' /><param name='display count'
value='yes' />
         name='language'
                           value='en-US'
<param
                                          /><param
name='filter'
              value='publish=yes'
                                   /></object></div>
<script type='text/javascript'>
                                      var divElement
= document.getElementById('viz1681483729986');
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(script
Element, 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>
```

```
xxxxxx Street, xxx, xx 53xxx2
                <div>
               <div class="email">
               <ii
       class="bi
                   bi-
       envelope"></i>
       <h4>Email:</h4
       >
               info@example.com
               <div>
               <div class="phone">
                <i
       class="bi bi-
       phone"></i>
       <h4>Call:</
       h4>
               +1 5xxx 5xxx8 5xs
              </div>
 <iframe
src="https://www.google.com/maps/embed?pb=!1m14!1m8!1m3!1d12097.43
3213460943!2d-74.0062269!3d40.
7101282!3m2!1i1024!2i768!4f13.1!3m3!1m2!1s0x0%3A0xb89d1fe6bc49944
Downtown+Conference+Center!5e0!3m2!1smk!2sbg!4v1539943755621"
frameborder="0" style="border:0; width: 100%;
height: 290px;" allowfullscreen></iframe>
                                           </div>
     </div>
```

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```
<div class="col-lg-7 mt-5 mt-lg-0 d-flex align-items-stretch">
                    action="forms/contact.php"
      <form
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"</pre>
required>
         </div>
         <div class="form-group col-md-6">
          <label for="name">Your Email</label>
                    type="email"
                                    class="form-control" name="email"
          <input
id="email" required>
         </div>
        </div>
        <div class="form-group">
         <label for="name">Subject</label>
                                  class="form-control"
         <input
                   type="text"
                                                         name="subject"
id="subject" required>
        </div>
        <div class="form-group">
         <label for="name">Message</label>
                    class="form-control"
                                           name="message" rows="10"
         <textarea
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</br/>/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>
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  </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>
                                        bx-chevron-right"></i>
          <1i><i
                       class="bx
                                                                     <a
  href="#hero">Home</a>
                                        bx-chevron-right"></i>
          <1i><ii
                       class="bx
                                                                     <a
  href="#about">About</a>
                                        bx-chevron-right"></i>
          <1i><ii
                       class="bx
                                                                     <a
  href="#portfolio">Charts</a>
```

```
i> class="bx bx-chevron-
right"></i>
                                    <a
href="#team">Dashboard</a>
<li><i class="bx bx-chevron-right"></i>
<a href="#pricing">Story</a>
<
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>
     <div class="col-lg-3 col-md-6 footer-links">
      <h4></h4>
      <ul>
<
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```

```
<
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>
     <div class="col-lg-3 col-md-6 footer-links">
      <h4></h4>
      <ul>
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<
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>
     <div class="col-lg-3 col-md-6 footer-links">
      <h4>Our Social Networks</h4>
     <div class="social-links mt-3">
                      href="https://www.linkedin.com/in/hariprabu741/"
 class="linkedin"></i>linkedin"></i>
```

```
<a href="#" class="twitter"><i class="bx bxl-twitter"></i></a>
       <a
             href="#"
                          class="facebook"><i
                                                class="bx
                                                             bxl-
facebook"></i></a>
              href="#"
       <a
class="instagram"><i class="bx
bxl-instagram"></i></a>
<a href="#" class="google-
plus"><i class="bx bxl-
skype"></i></a>
      </div>
     </div>
<
d
<
d
\mathbf{v}
  </div>
  <div class="container footer-bottom clearfix">
```

```
<div class="copyright">
    © 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/licen
se/ -->
           <!-- 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/boots
trap.bundle.min.js"></script>
<script
```

```
src="assets/vendor/glightbox/js/gligh
tbox.min.js"></script>
 <script src="assets/vendor/isotope-</pre>
layout/isotope.pkgd.min.js"></scrip
                             <script
t>
src="assets/vendor/swiper/swiper-
bundle.min.js"></script>
 <script
src="assets/vendor/waypoints/nofram
ework.waypoints.js"></script>
<script src="assets/vendor/php-email-</pre>
form/validate.js"></script>
 <!-- Template Main JS File -->
 <script src="assets/js/main.js"></script>
</body>
</html>
```