THE TRAGEDY OF FLIGHT-A COMPREHENSIVE CRASH ANALYSIS

Team Members:

N. NAGALAKSHMI

A.SRI DEVI

S.THULASI MANI

G. BALA MURUGESHWARI

III B.Sc., Physics

Govindammal Aditanar College for Women Tiruchendur

1. INTRODUCTION

Overview:

Accidents in air transport are dominated by the failure of human factor and the technical failure. A system of models appears to be an important tool for overall understanding of the complexity of human factors and technical factors. There are totally 8 milestones explaining about our projects. They are defining problem, problem understanding, Data collection and extraction from database Data preparation, data visualization, Dashboard, Story, Web integration and project demonstration and Documentation. Four percentages of airplane crashes are due to Air Traffic Negligence.

Purpose:

The purpose of this project is to understand and analysis about the airplane crashes. Keeping a system of models is one of the most important techniques to understand the cause of airplane crash. To avoid the causes of airplane crashes, Airplane crash analysis plays a major role. Airtraffic control aims to move aircraft safely and efficiently through the airspace system. Controllers keep aircraft set distances apart while moving them from airport to airport using set routes.

2. Problem Definition & Design Thinking Empathy Map

SAYS:

- call emergency services and wait for rescue

- Don't wander off

- If plane crash occurs ,people believed that, there is an safety measures

- May like to add extra features for plane

- project creates awareness

THINK:

- Fly on non stop routings

- Planes should have extra safety measures

- Don't bring any hazardous materials

- Keep your seat belt, fastened you are seated

DOES:

- Ensure all repairs to our aircraft are completed skilled, qualified technicians

- Flight situational awareness are vital

- Good communication between Pilots and ATC

- Maintenance must be needed

- Notice the value of fuel
- Conducting a preflight check

FEEL:

- Lots and lots of people will injured in unknown places

- Rescue teams doesn't know the crashed place

- If the Flight is missed, there is no idea to how to find that

- Before crashing, The Pilot or captain doesn't know the exact reason

BRAIN STORMING AND IDEATION:

N.Nagalakshmi

- Improving aviation safety facilities
- Proper communication with pilots
- Monitor aircraft as they travel through the skies

A.Sri Devi

- Have to make quick decisions to keep planes
- Inform pilots of weather and landing circumstances
- Direct the movement of planes in the air and on the ground at airports by using rader,computers

G.Bala Murugeshwari

- Controller are in charge of more than one
- Improving systems for ensuring
- Notify pilots, when

S.Thulasi Mani

- Improving air traffic information
- Proper staffing and management
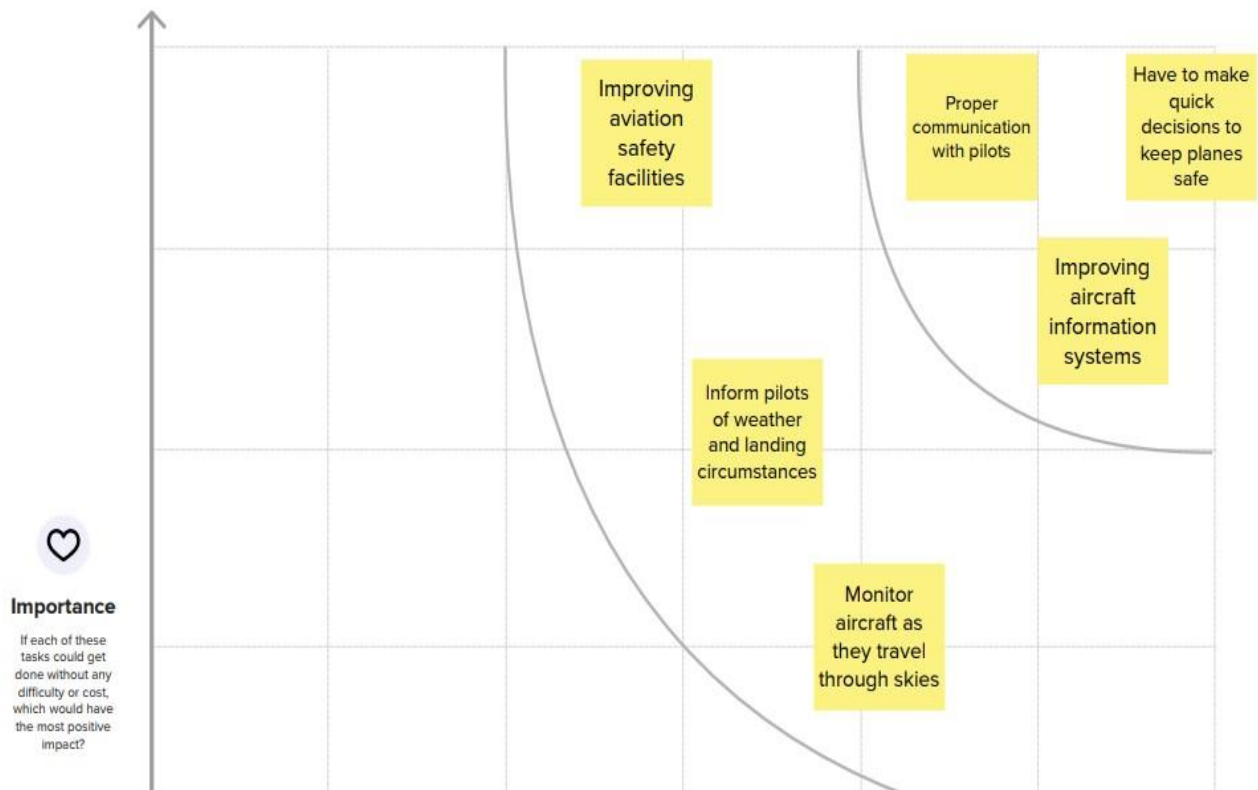- To promptly respond to a developing emergency

Improvement of Systems

- Improving air traffic information systems
- Improving systems for ensuring the safety of aircraft
- Improving air traffic information systems
- Proper staffing and management of air traffic controllers

Controller aid to Pilot

- Proper communication with pilots
- Inform pilots of weather and landing circumstances
- Notify pilots when hazards are present
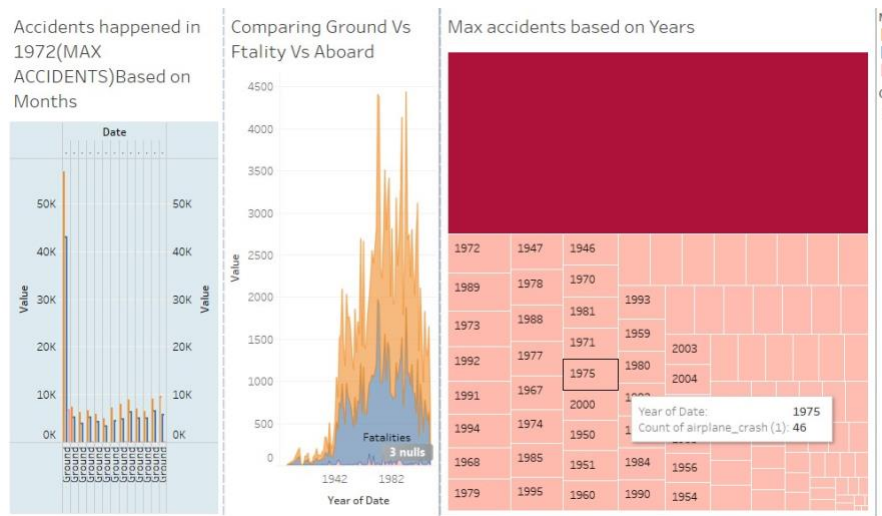- To promptly respond to a developing emergency

Roles of the Controller

- Controllers are in charge of more than one plane at once
- Have to make quick decisions to keep planes safe
- Direct the movement of planes in the air and on the ground at airports by using radar,computers
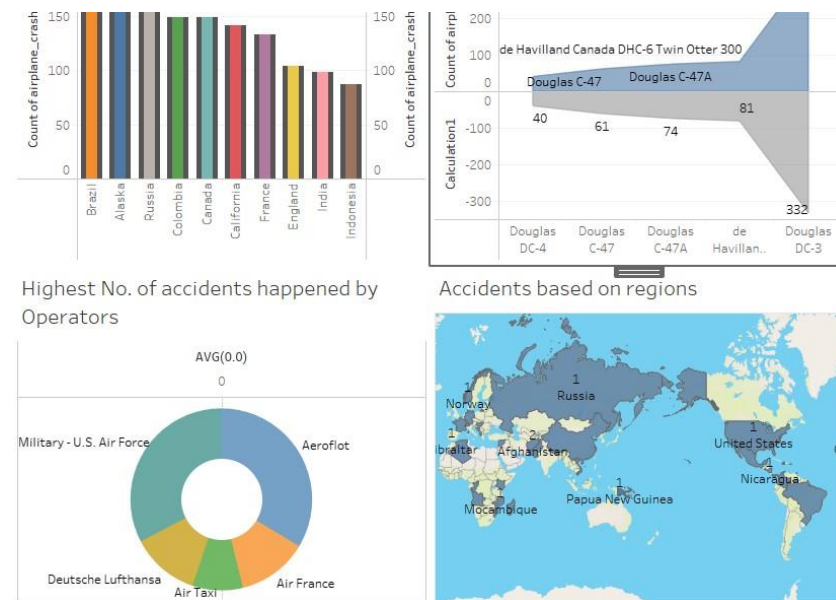- Monitor aircraft as they travel through the skies

Importance

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

Improving aviation safety facilities

Proper communication with pilots

Have to make quick decisions to keep planes safe

Improving aircraft information systems

Inform pilots of weather and landing circumstances

Monitor aircraft as they travel through skies

3. RESULT:

Dashboard 1:

Accidents happened in 1972(MAX ACCIDENTS)Based on Months

Comparing Ground Vs Ftality Vs Aboard

Max accidents based on Years

Dashboard 2:

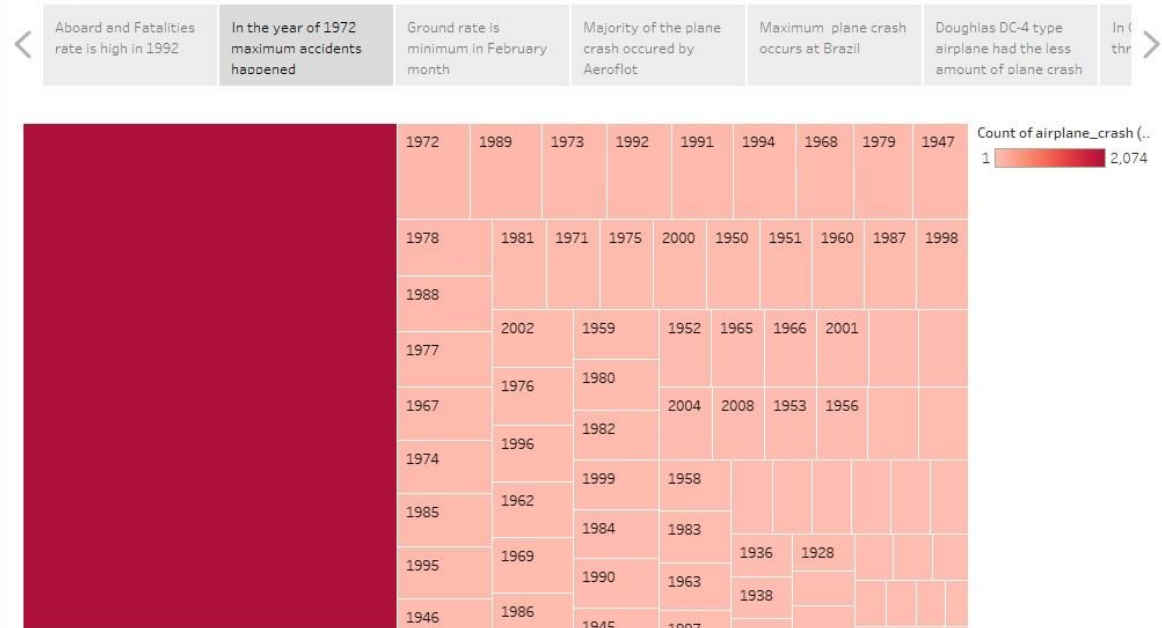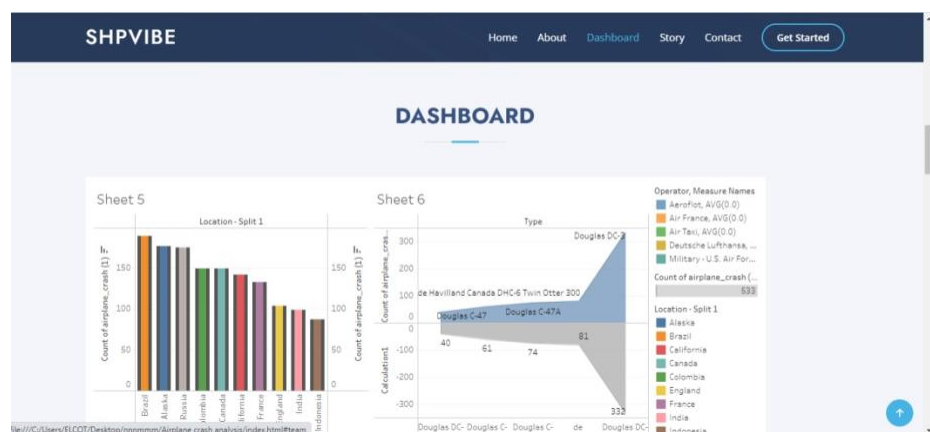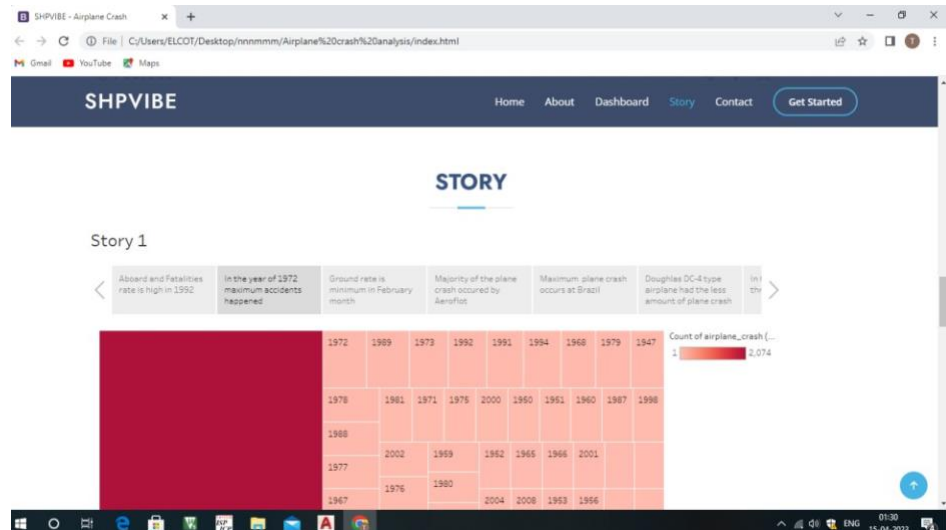Highest No. of accidents happened by Operators

Accidents based on regions

Story:

Story 1

Web Integration:

4. ADVANTAGES AND DISADVANTAGES

Advantages:

- The creation of a safe place of work.

- The development & operation of safe working practices.

- Ensuring the personal safety of all employees

- To determine the cause of error once an accident has happened

- This analysis help to find the cause of an accident and able to avoid that.

Disadvantages:

- Non adherence of the rules by peoples.

- Lack of knowledge about plane crash analysis.

- It has a negative point of view too.

5. APPLICATIONS:

- Preflight-Weather forecast is communicated from the air traffic control tower to the pilot and clearance is then provided.

- Take off/departure-During takeoff the tower gives the airplane clearance to lift off the ground departure is when the plane is five miles beyond airport

- In the air, the over light is given to an Air Route Traffic Control Centre(ARTCC),which is a rador system supervising flights within the area.

- Descent/approach –Descent is when the plane is within 50 mile of its destination.The approach is when the TRACON controllers fuses several streams of descending airplanes

- Landing-The local controller gives clearance for landing and directs pilots through taxiways.

6. CONCLUSION :

Air traffic negligence is one of the cause for the airplane crash and is analysed and visualized using various graphs.There should be no negligence in the Air Traffic Control.Air traffic controllers should be well aware about that.

7. FUTURES SCOPE

There are lots of enhancements that can be made in the future. Some of the enhancements that can be made in the future are given below. ADS-B is quite simply the future of air traffic control. A key element of the next Gen system, it uses GPS satellite signals to provide air traffic controllers and pilots with much more accurate information on air craft position that will help keep aircraft safely separated in the sky and on runways. Another technology called Flight Deck Interval Management or FIM and its key benefit is that it will help air traffic controllers and pilots more precisely manage and safely shorten the time or interval, between airplanes landing on a runway.

8. APPENDIX:

```
!DO
CTY
PE 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,400,400
i,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">SHPVIBE</h1>

<!-- Uncomment below if you prefer to use an image logo -->

```html
<!-- <a href="index.html" class="logo me-auto"><img src="assets/img/logo.png" alt="" class="img-fluid"></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="glightbox btn watch-video"><i class="bi bi-play-circle"></i><span>Watch Video</span></a>
```

```html
</div>

</div>

<div class="col-lg-6 order-1 order-lg-2 hero-img" data-aos="zoom-in" data-aos
delay="200">
<img src="assets/img/a1.jpg" class="img-fluid animated" alt="">

</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

```html
</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:

<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>

</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>
```

```html
</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='viz1681374971954' style='position:
relative'><noscript><a href='#'><img alt='Dashboard 2 '
src='https:&#47;&#47;public.tableau.com&#47;static&#47;images&#47;Da&#47;Das
hboard_16813150711120&#47;Dashboard2&#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='Dashboard_16813150711120&#47;Dashboard2' /><param

name='tabs' value='no' /><param name='toolbar' value='yes'
/><param name='static_image'
value='https:&#47;&#47;public.tableau.com&#47;static&#47;images&#47;Da&#47;D
ashboard_16813150711120&#47;Dashboard2&#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' /></object></div> <script
type='text/javascript'> var divElement =
document.getElementById('viz1681374971954'); var vizElement =
divElement.getElementsByTagName('object')[0]; if ( divElement.offsetWidth > 800 ) {
vizElement.style.width='1000px';vizElement.style.height='827px';} else if (
divElement.offsetWidth > 500 ) {
vizElement.style.width='1000px';vizElement.style.height='827px';} else {
```

```
vizElement.style.width='100%';vizElement.style.height='1527px';} 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        class='tableauPlaceholder'        id='viz1681375532627'        style='position:
relative'><noscript><a href='#'><img alt='Story 1 '
src='https://public.tableau.com/static/images/5G/5GS
9SJ6RS/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='path'
value='shared/5GS9SJ6RS' /> <param name='toolbar' value='yes' /><param
name='static_image'
value='https://public.tableau.com/static/images/5G/5
GS9SJ6RS/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' /></object></div> <script
type='text/javascript'>        var        divElement        =
document.getElementById('viz1681375532627');        var        vizElement        =
divElement.getElementsByTagName('object')[0];
vizElement.style.width='1016px';vizElement.style.height='991px'; var scriptElement =
document.createElement('script'); scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
vizElement.parentNode.insertBefore(scriptElement, vizElement); </script>
```
</section><!-- End Pricing Section -->

<!-- ======= Contact Section ======= -->

<section id="contact" class="contact">

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

<div class="section-title">

```html
<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 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>
```

```html
<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>
```

```html
</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>
```

```html
<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>
```

```html
        </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>
```

```html
</body>

</html>
```