

Dr. ZAKIR HUSSAIN COLLEGE, ILAYANGUDI

P.G DEPARTMENT OF MATHEMATICS

UNEARTHING THE ENVIRONMENTAL IMPACT OF HUMAN ACTIVITY:

A GLOBAL CO2 EMISSION ANALYSIS

**SUBMITTED BY,**

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# 1. INTRODUCTION

## 1.1 OVERVIEW

Global warming is one of the biggest challenges currently being faced by the human race, although correlation is not causation, a likely cause of global warming is due to increased atmospheric carbon dioxide from human activities. CO2 Emission refers to the Carbon Dioxide emitted throughout the world. For this analysis we will be focusing on CO2 Emissions and its effect on the world we live in as well as some key factors and stats that may play a role in the emission of CO2 globally. Fossil fuel use is the primary source of CO2. The data throws light onto how much fossil fuels are burnt, per year per nation, which amounts to an increase in CO2 every year.

## 1.2 PURPOSE

The carbon in CO2 can be used to produce fuels that are in use today, including methane, methanol, gasoline and aviation fuels. This will help researches and environment expert to predict global warming. So countries should set a goal to decrease this amount yearly. There are also a number of natural ways of gathering more CO2, from **planting more forests** to **sequestering more carbon in the soil**. Carbon dioxide emissions are the primary driver of global climate change. It's widely recognized that to avoid the worst impacts of climate change, the world needs to urgently reduce emissions. But, how this responsibility is shared between regions, countries, and individuals has been an endless point of contention in international discussions.

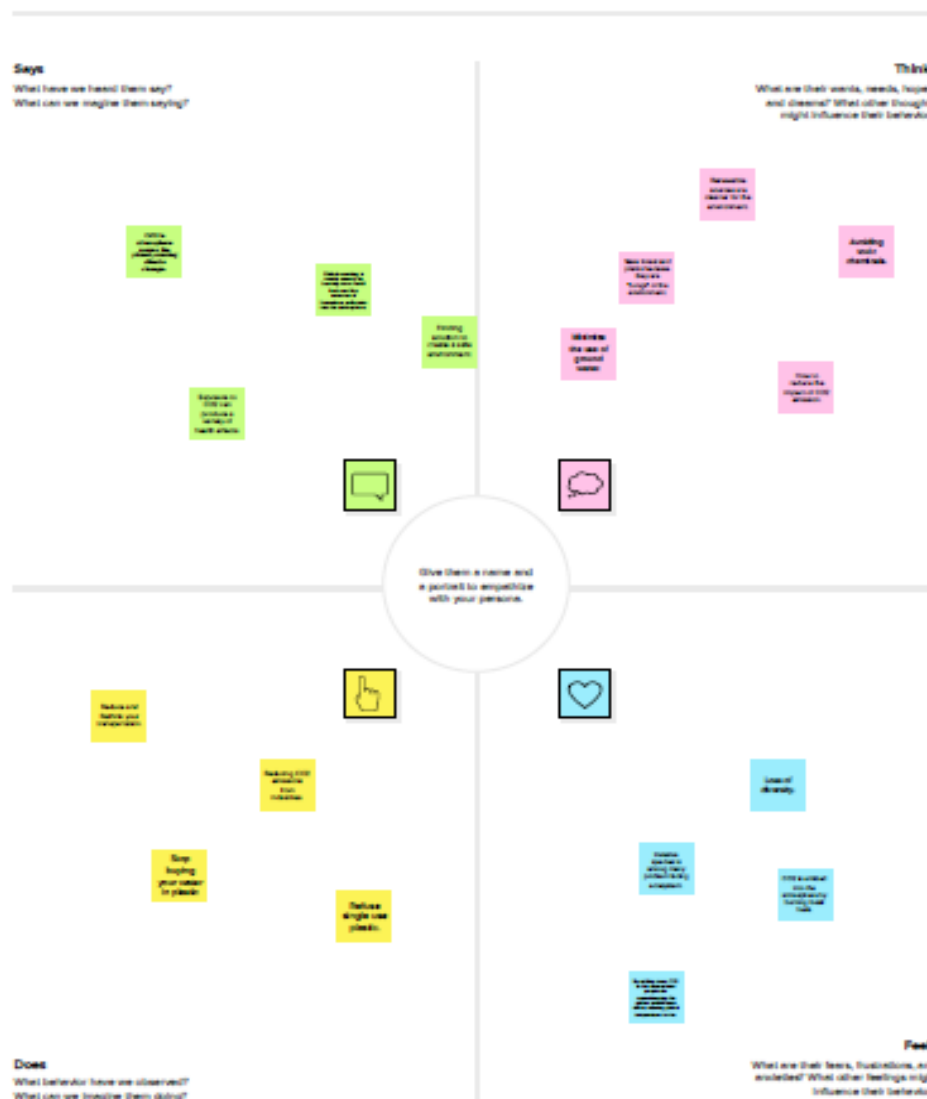
## 2. PROBLEM DEFINITION & DESIGN THINKING

### 2.1 EMPATHY MAP



#### Build empathy

The information you add here should be representative of the observations and research you've done about your users.



## 2.2 IDEATION & BRAINSTROMING MAP

### 1 Define your problem statement

What problem are you trying to solve? Frame your problem as a clear, high-level statement. This will be the focus of your brainstorm.

↳ Hint: Focus

Notes

Example problem: CO<sub>2</sub> emissions from transport activities in urban environments

### 2 Key roles of brainstorming

To generate and explore ideas

- Brainstorming
- Brainstorming
- Brainstorming
- Brainstorming
- Brainstorming
- Brainstorming
- Brainstorming
- Brainstorming

### 3 Brainstorm

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

↳ Hint: Focus

Notes

Example idea: Use electric vehicles for last-mile delivery

### 4 Group ideas

Take some starting your ideas with clustering similar or related ideas as you go. Once all ideas have been grouped, give each cluster a name that describes it. It's okay to change them as you go, try and see if you can break it up into smaller sub-groups.

↳ Hint: Focus

Notes

Example idea: Use electric vehicles for last-mile delivery

HUMAN-CAUSED CO<sub>2</sub> EMISSIONS

CO<sub>2</sub> EMISSIONS IN INDUSTRIES

CO<sub>2</sub> EMISSIONS IN TRANSPORTATION

IMPACT OF CO<sub>2</sub> EMISSIONS ON ENVIRONMENT

REDUCE CO<sub>2</sub> EMISSIONS

### 5 Prioritize

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

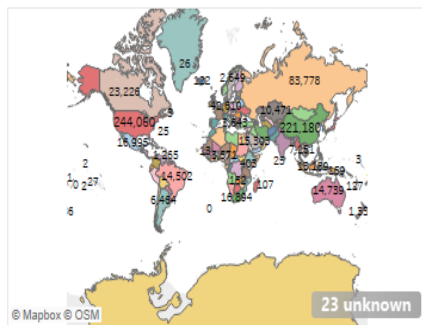
↳ Hint: Focus

Notes

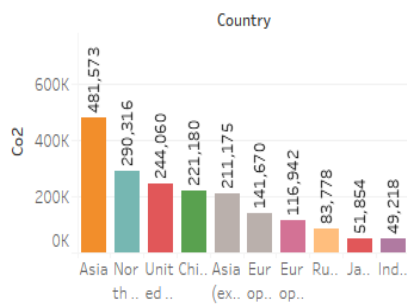
Example idea: Use electric vehicles for last-mile delivery

### 3. RESULT

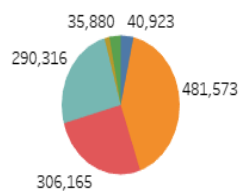
Total World Emission



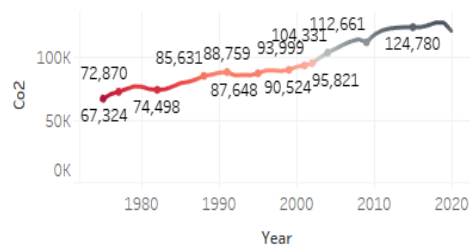
Top Emitting Countries



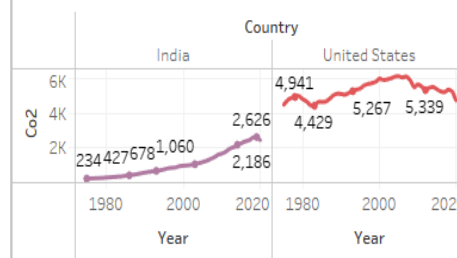
Total Emission by Continents



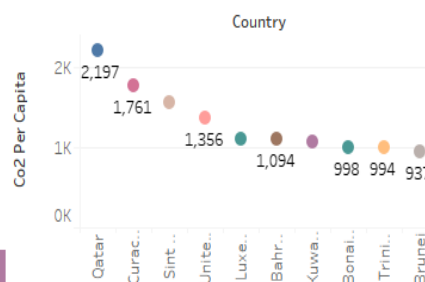
Total Co2 Emission Over Time



Co2 Emission India vs United States



Co2 Emission Per Capita



- Afghanistan
- Africa
- Albania
- Algeria
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barb..
- Argentina
- Armenia
- Aruba
- Asia
- Asia (excl. China ..
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize

Co2

Abc 0

Abc 200,000

Abc 400,000

Abc 600,000

Abc 800,000

Abc 1,000,000

Abc 1,206,633

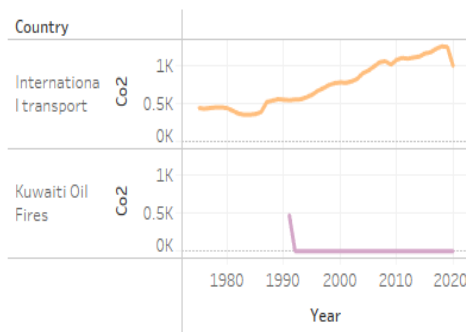
Top

10

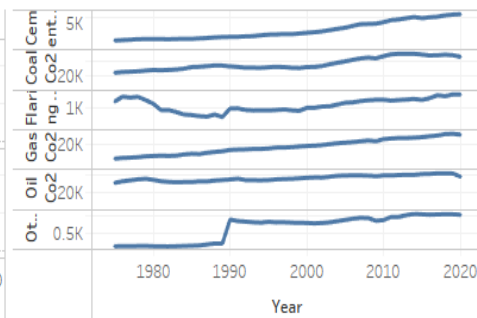
Co2

Next

### Co2 Emission by Other Factors



### Emission Rate by Internal Factors



International transp..  
Kuwaiti Oil Fires

Top

10

Measure Values

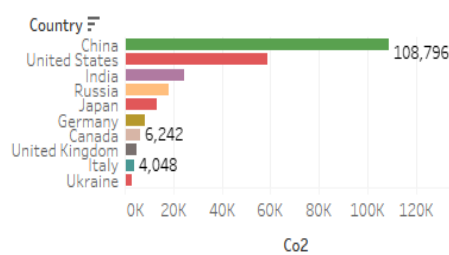
0 31,022

Measure Names

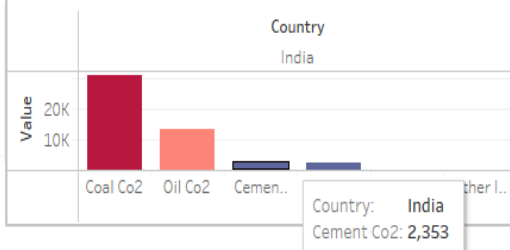
Co2 Per Capita

Cumulative Co2

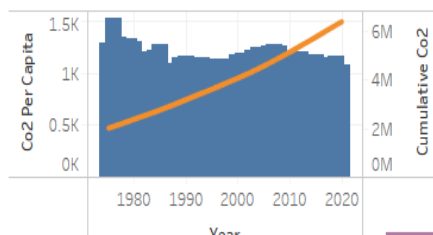
### Co2 Emission Over Past 10 Years



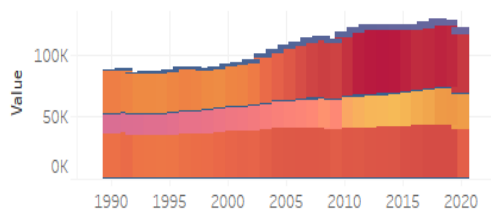
### Overall Contribution by India in Co2 Emission



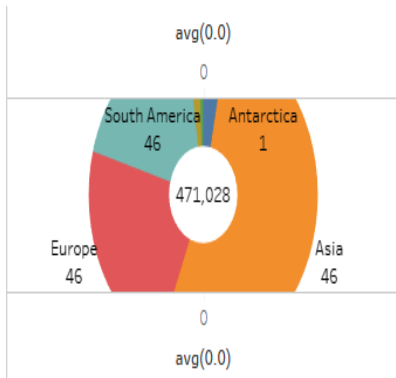
### Cumulative Co2 and Co2 per capita Over Years



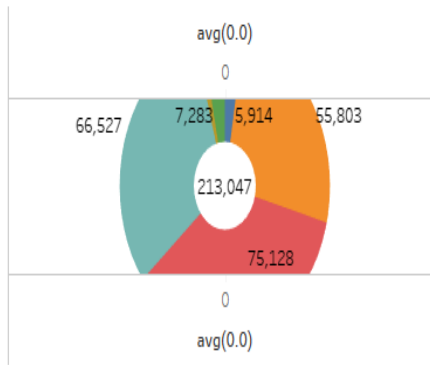
### Co2 Emission from 1990 to 2020 based on Internal Factors



Donut Chart for Coal Co2



Donut Chart for Gas Co2 Emission



Country

- Africa
- Antarctica
- Asia
- Europe
- North America
- Oceania
- South America

Coal Co2

471,028

Gas Co2

213,047

Flaring Co2 Per Capita

26.40

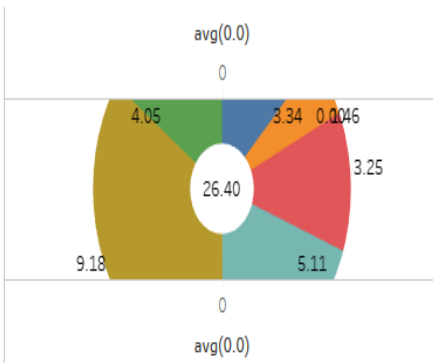
Cement Co2

37,625

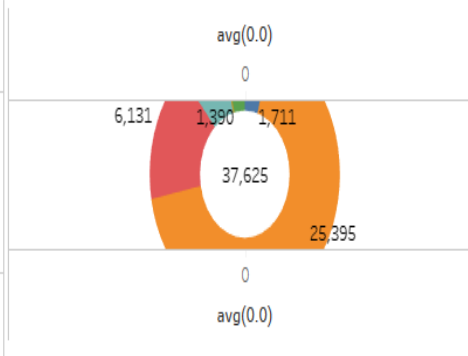
Oil Co2

427,299

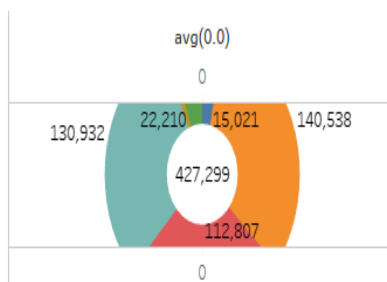
Donut Chart for Flaring Co2 Emission



Donut Chart for Cement Co2 Emission

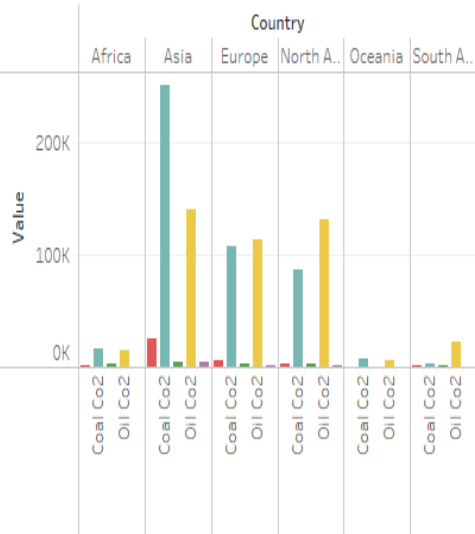


Donut Chart for Oil Co2 Emission

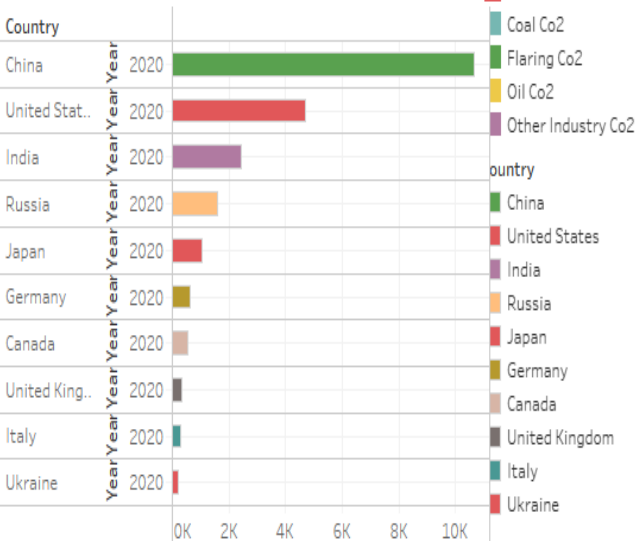


Next

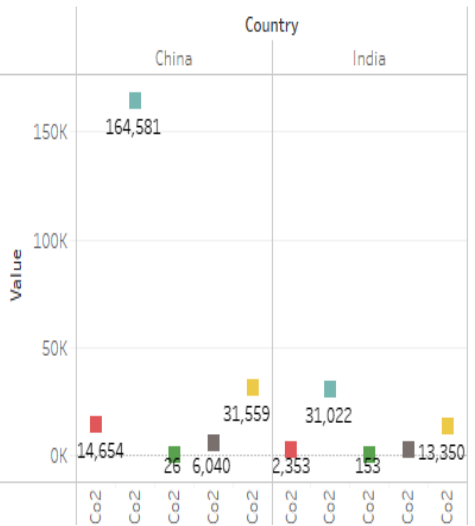
Continent Wise Contribution by Internal factors



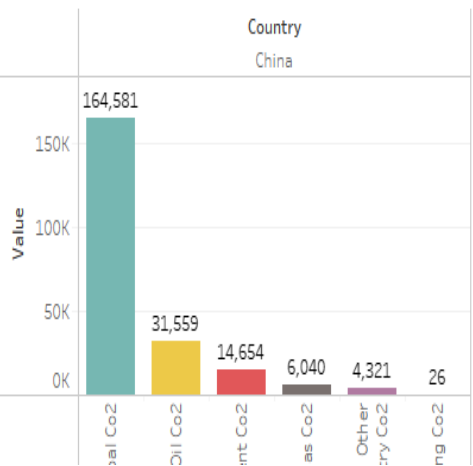
Co2 Emission in 2020



China vs India Internal Factors

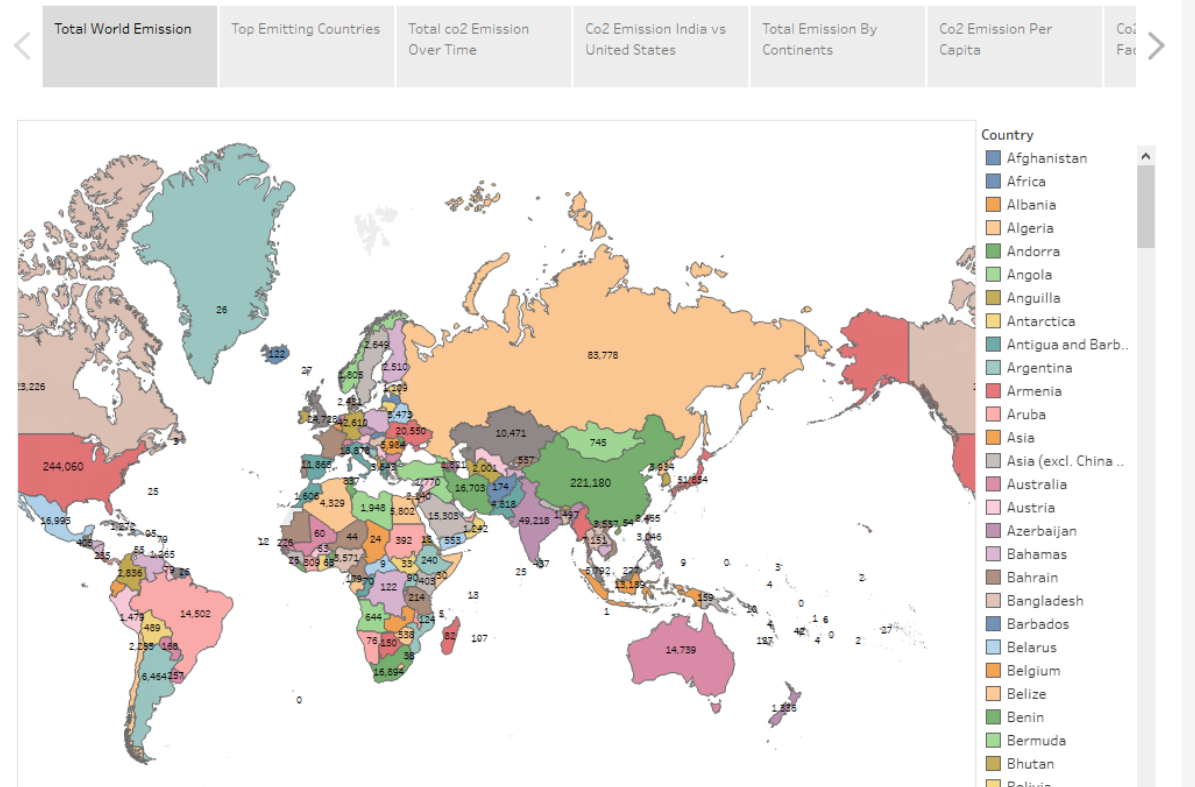


Overall Contribution By China in Co2 Emission

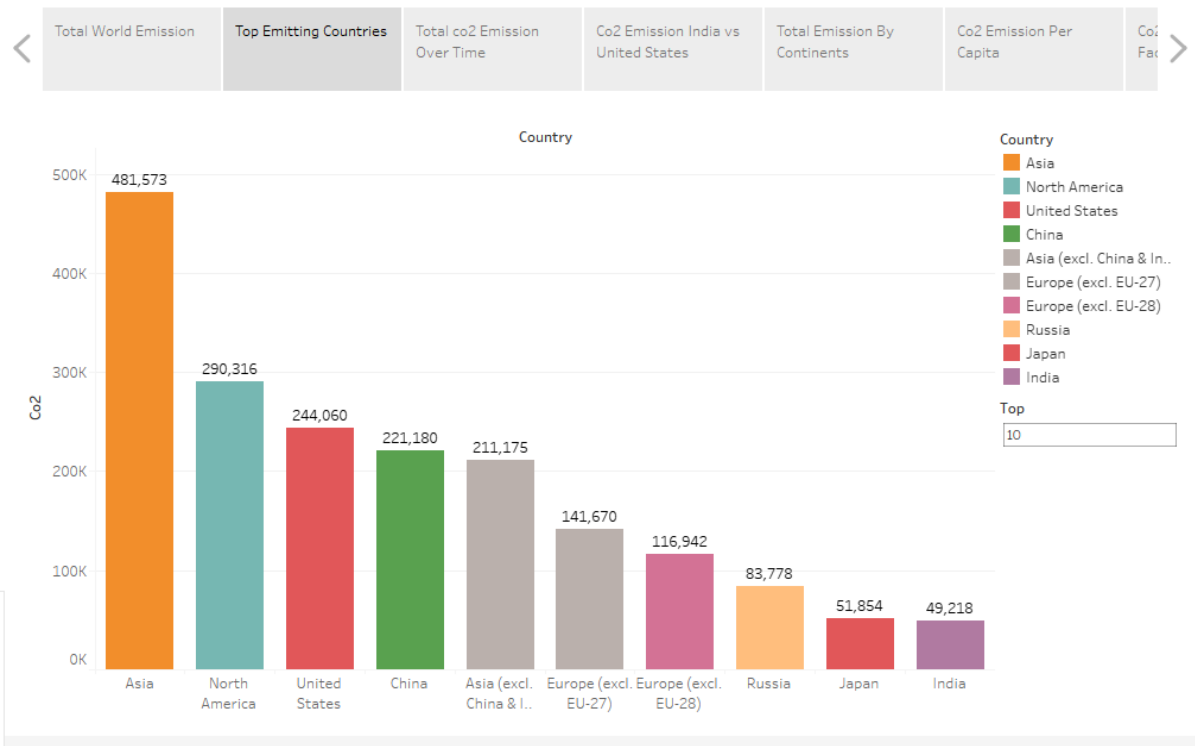




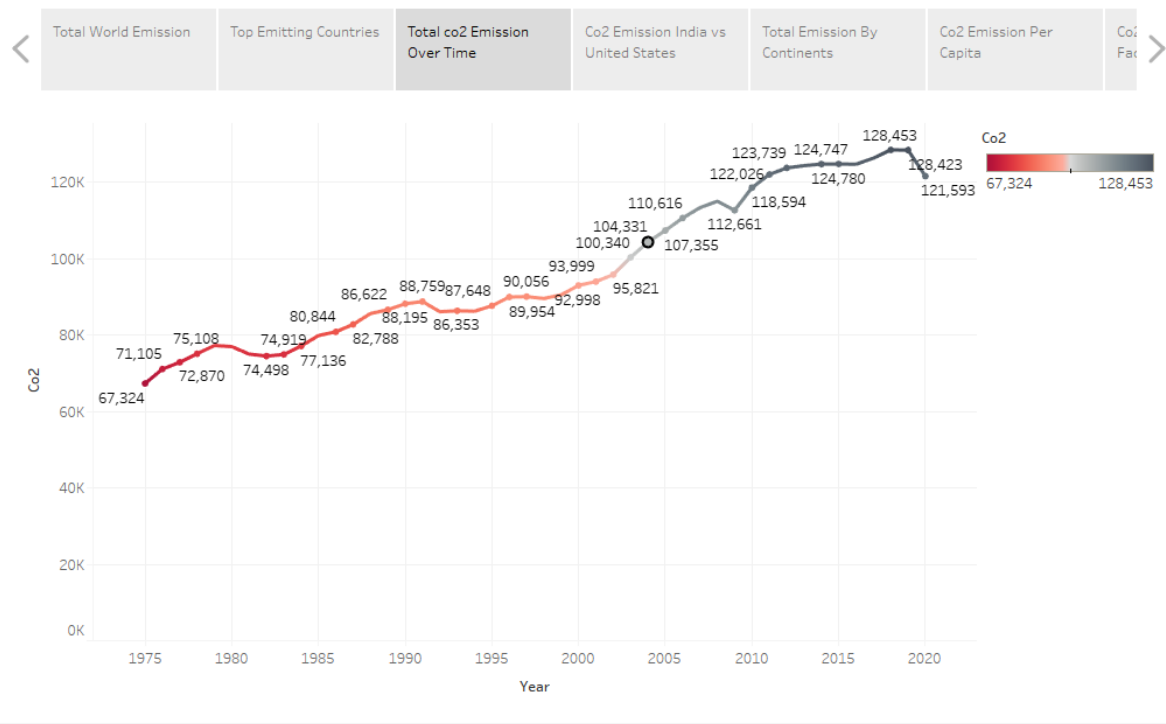
## Co2 Emission Story



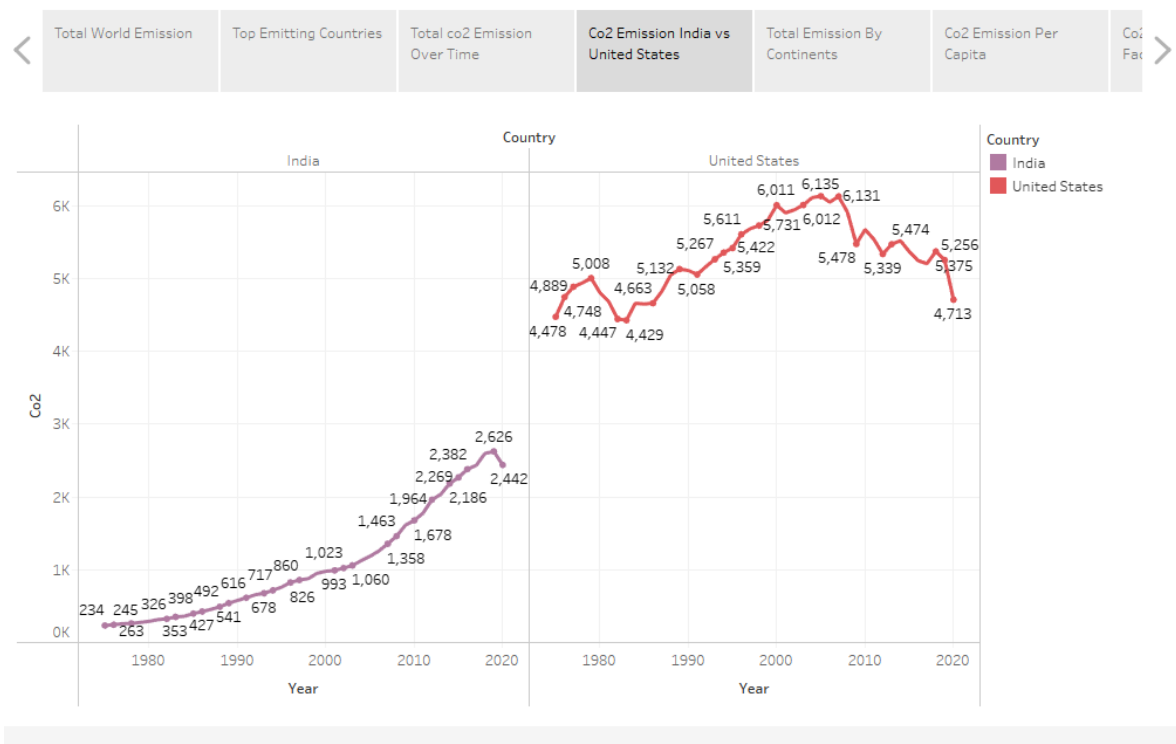
## Co2 Emission Story



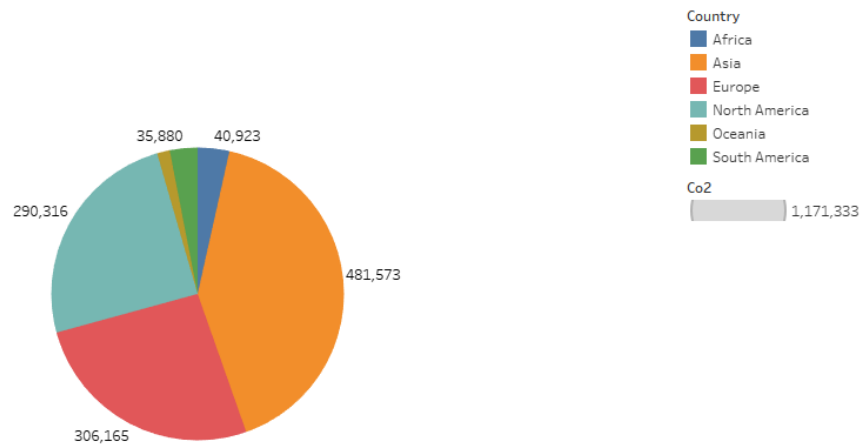
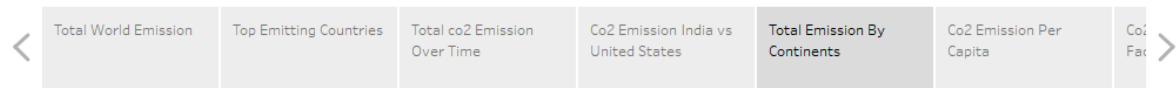
## Co2 Emission Story



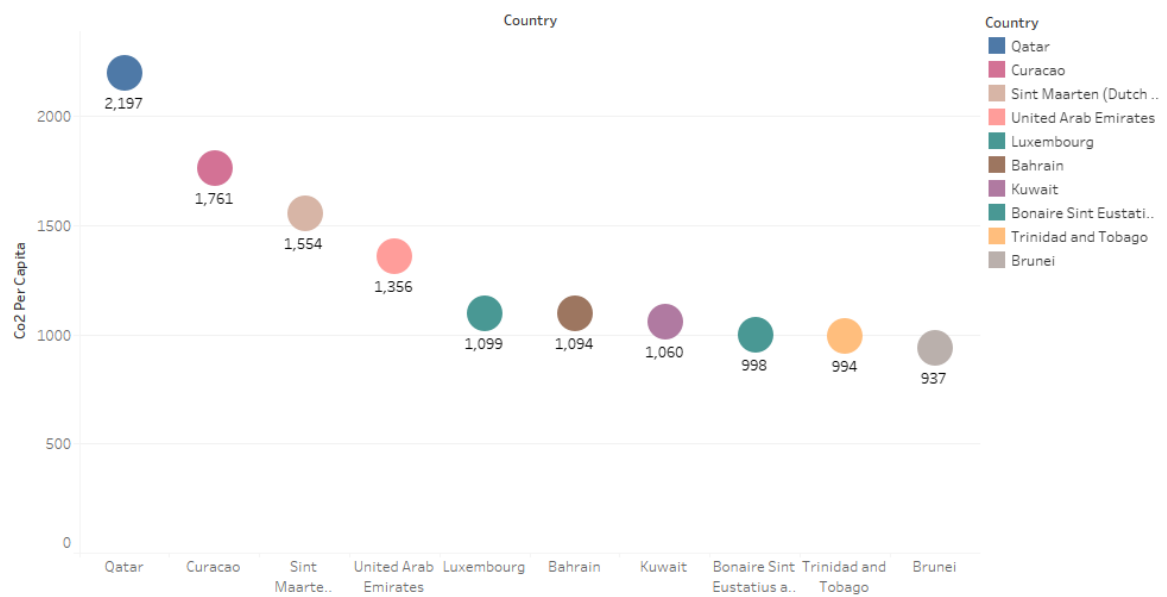
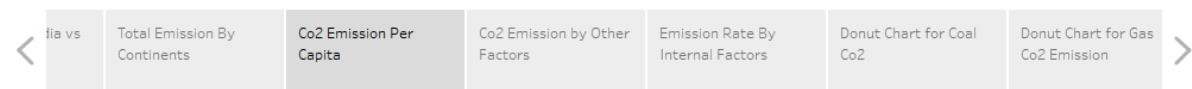
## Co2 Emission Story



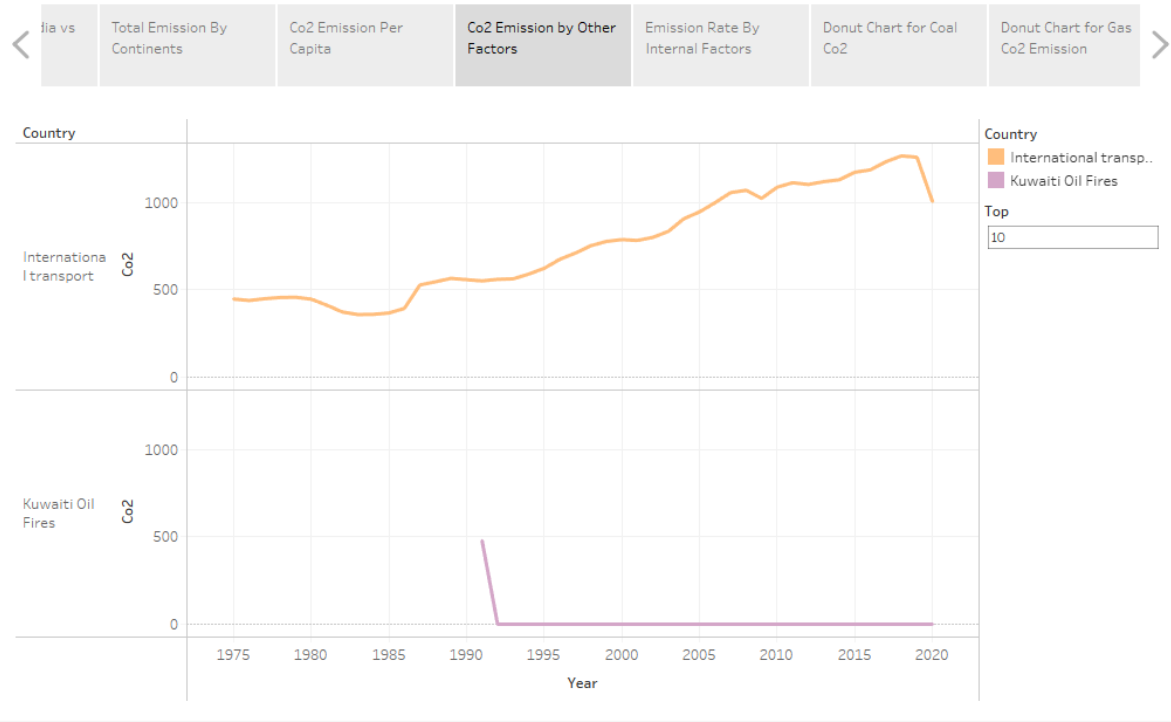
## Co2 Emission Story



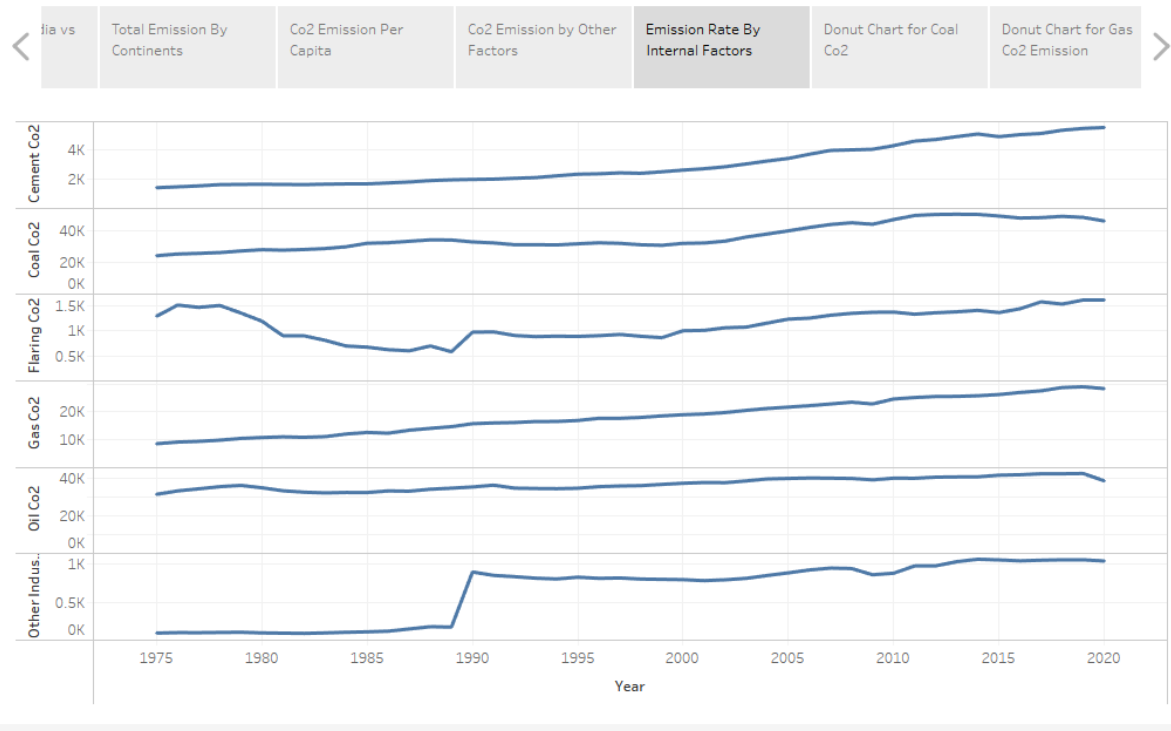
## Co2 Emission Story



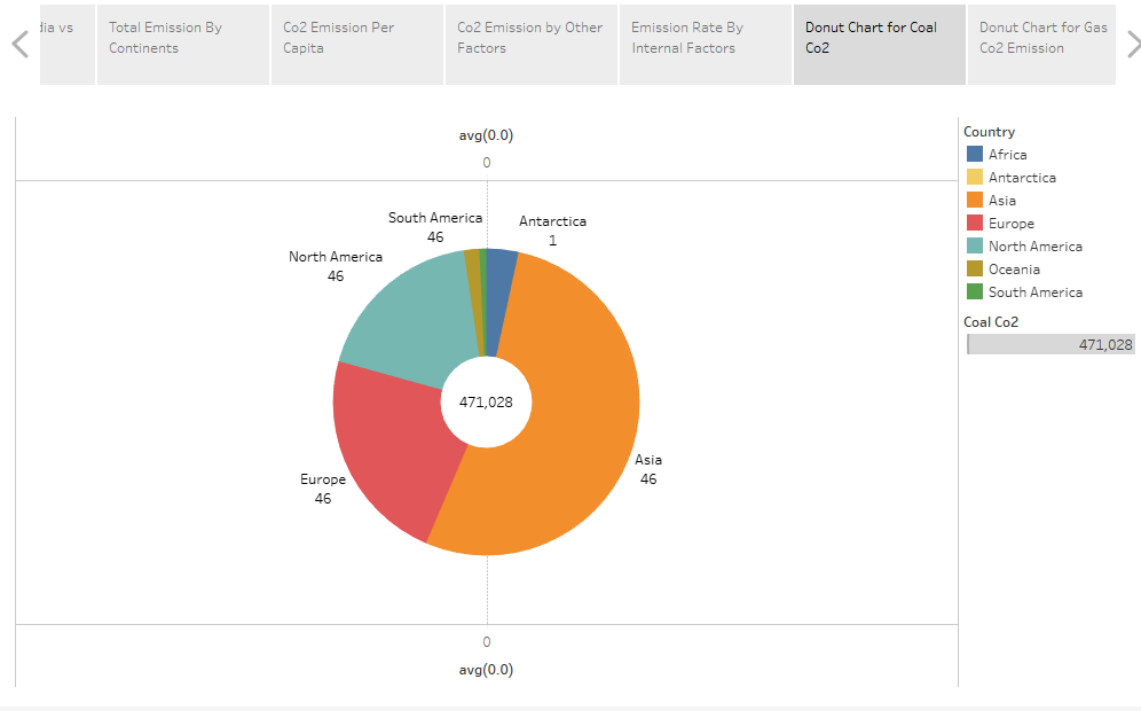
## Co2 Emission Story



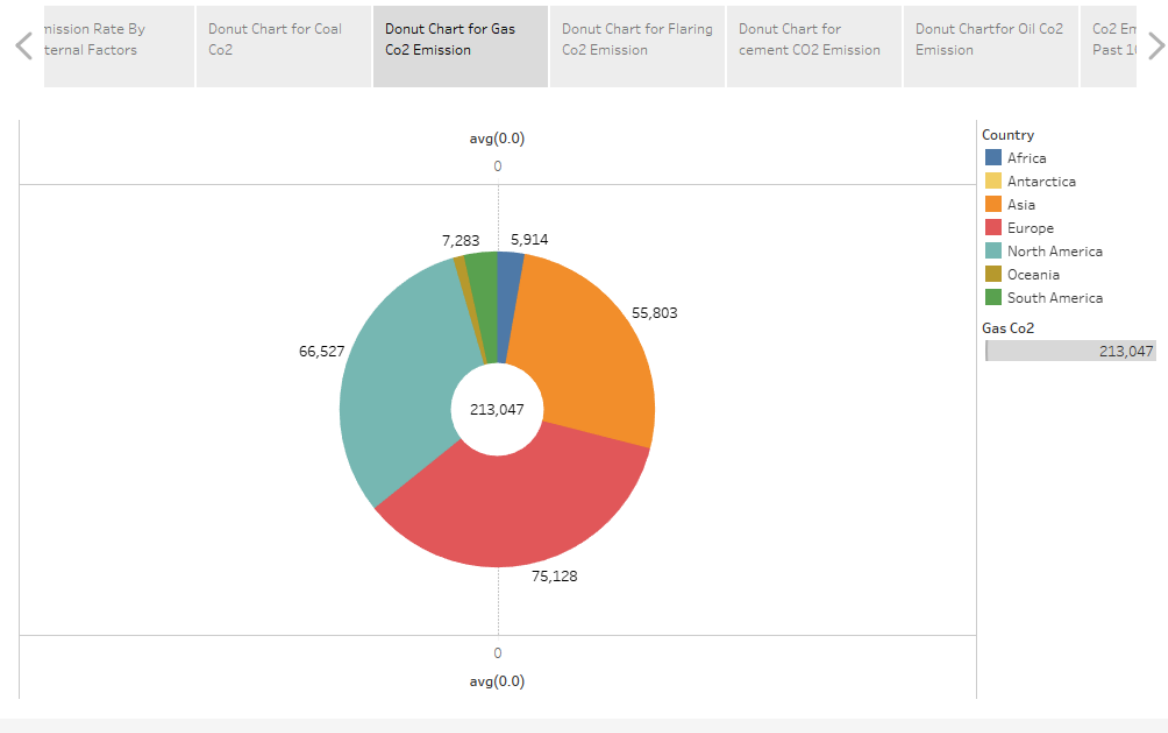
## Co2 Emission Story



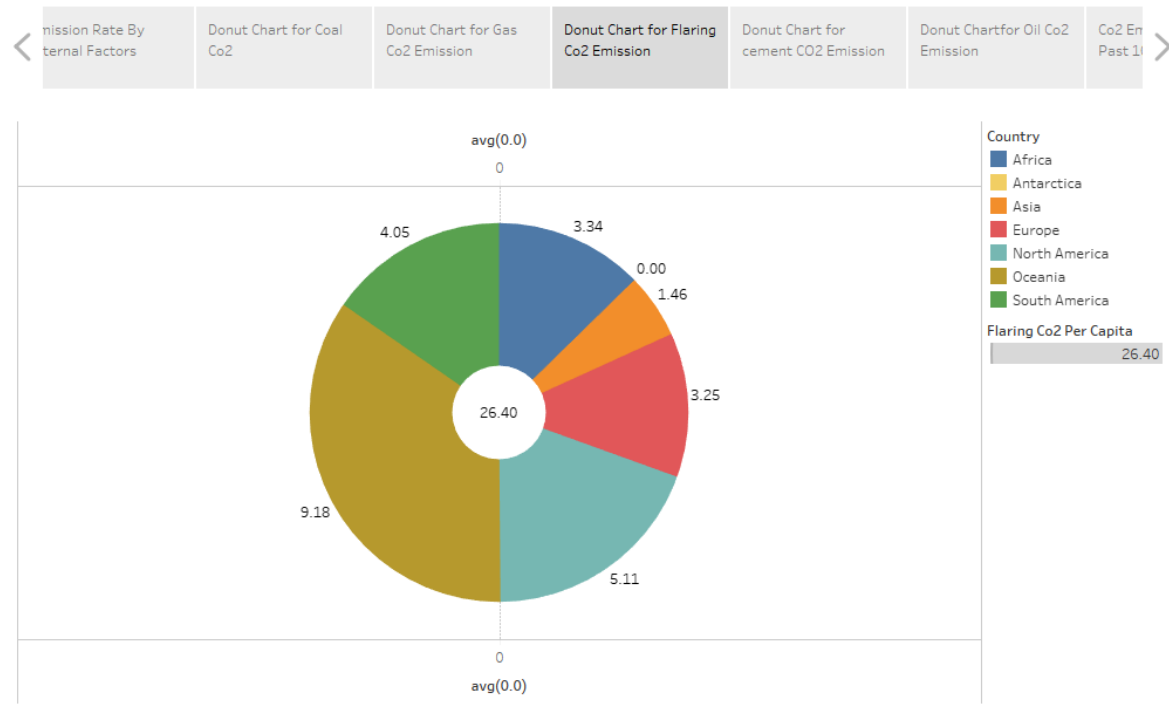
## Co2 Emission Story



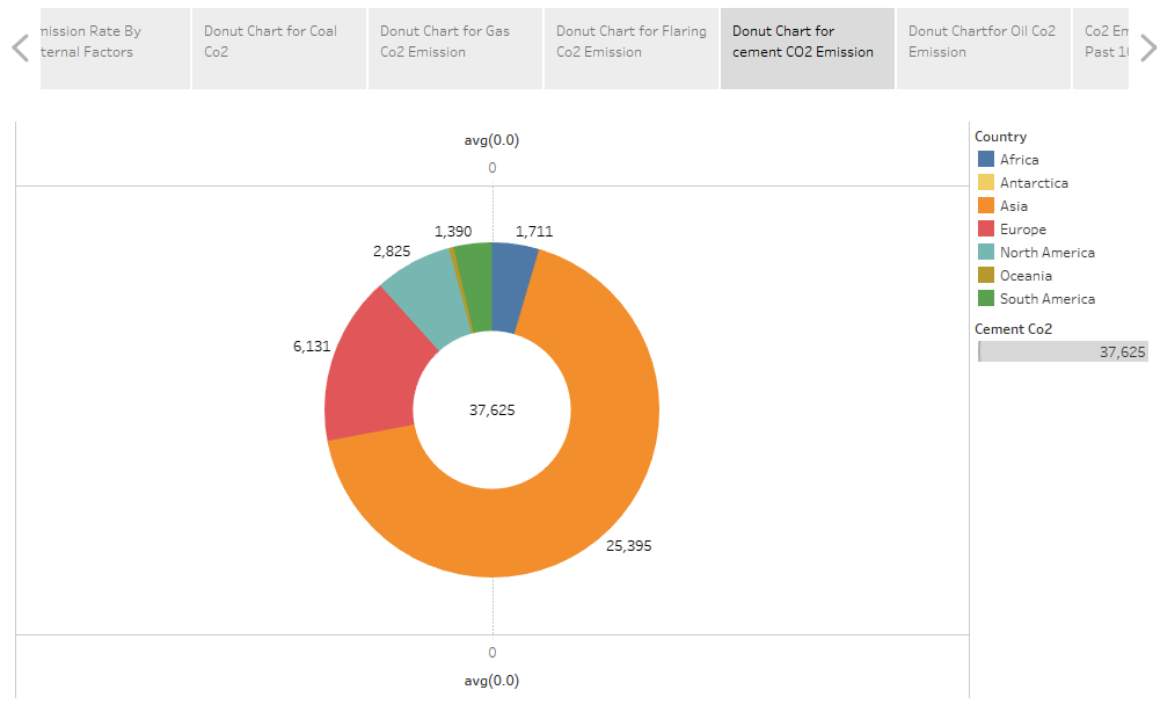
## Co2 Emission Story



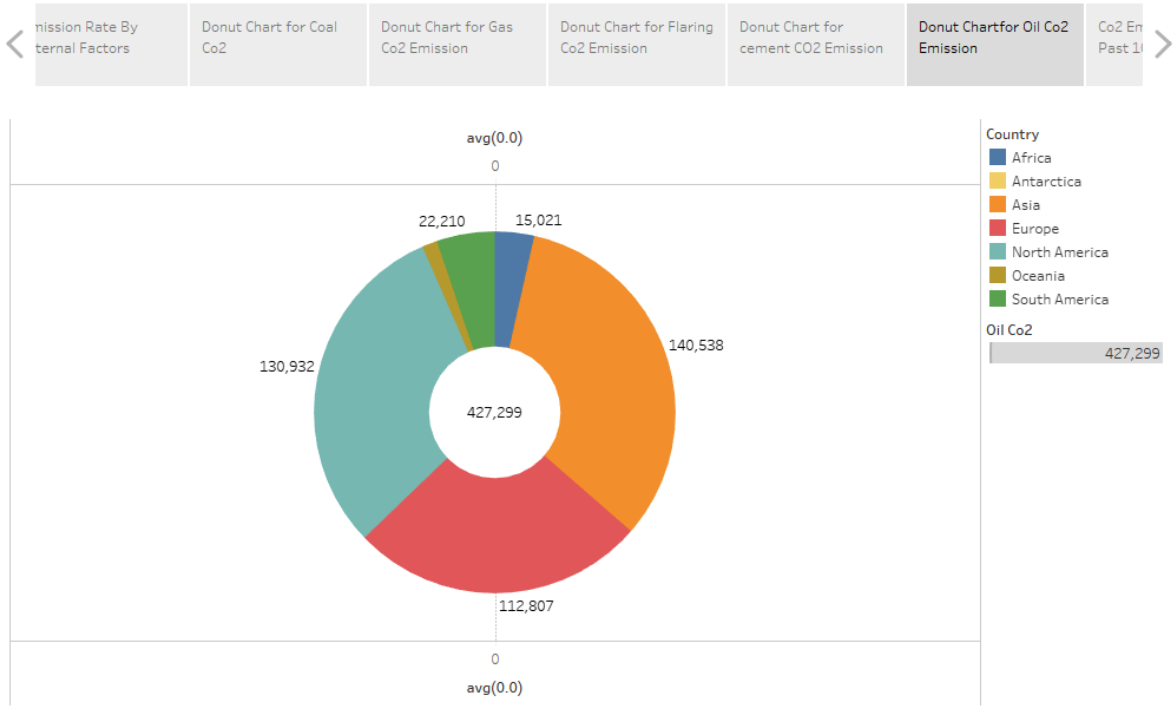
## Co2 Emission Story



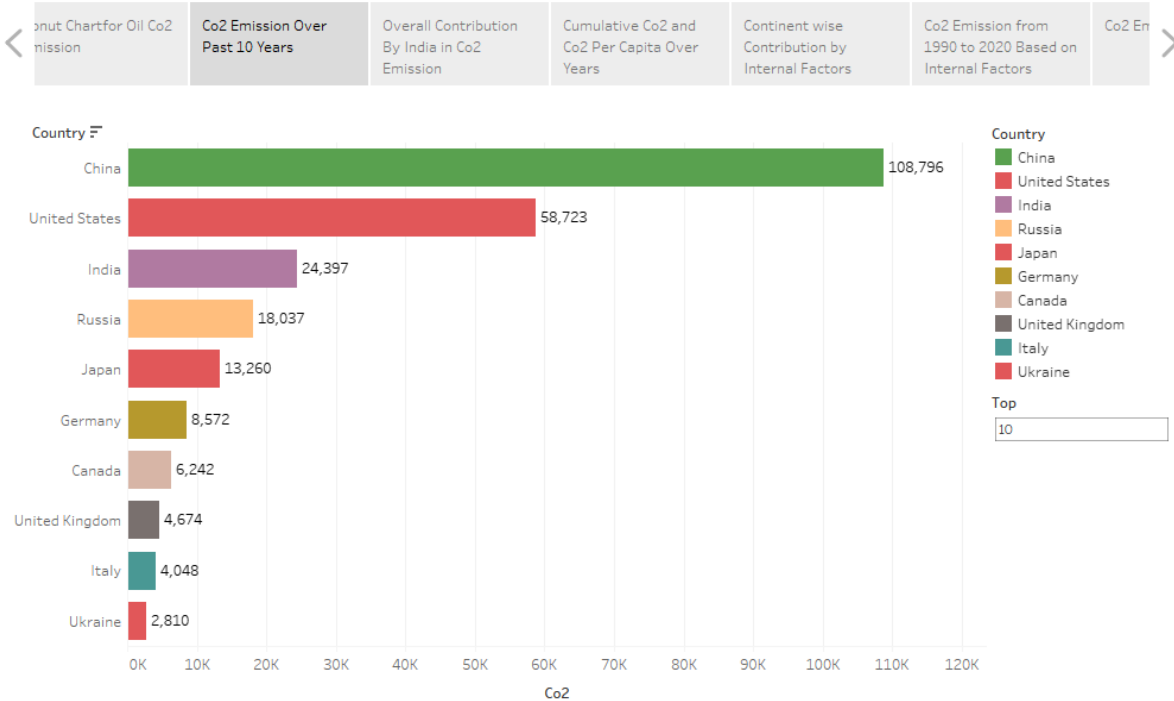
## Co2 Emission Story



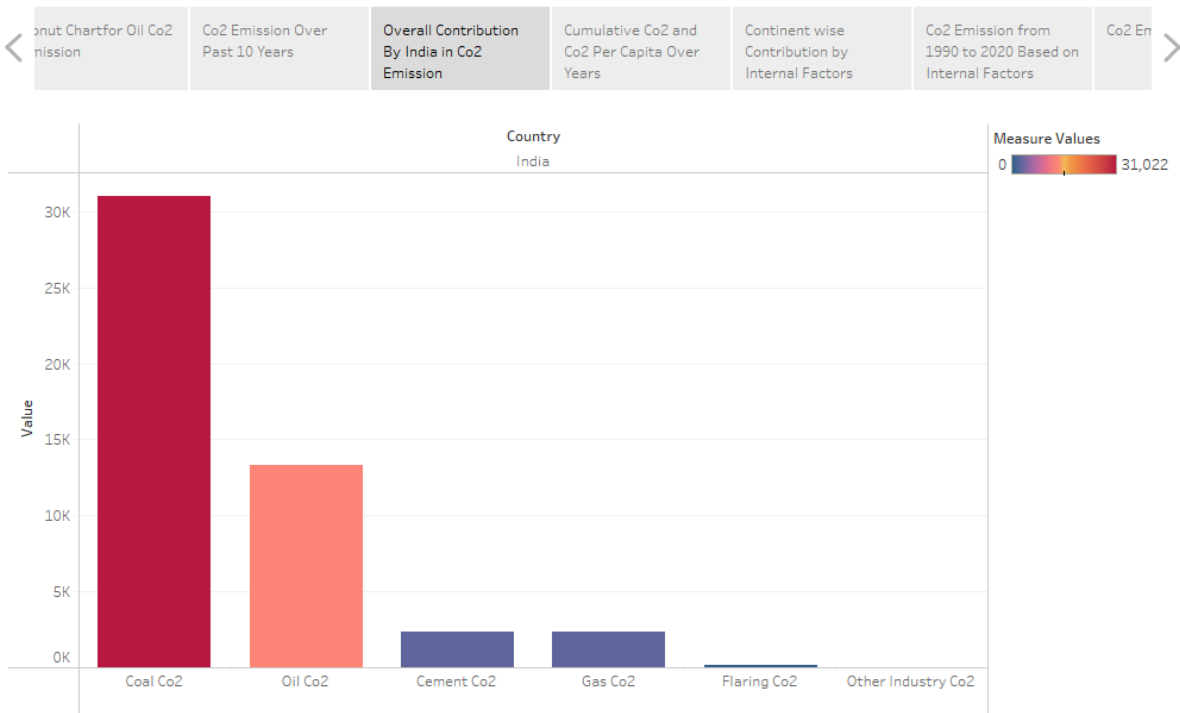
Co2 Emission Story



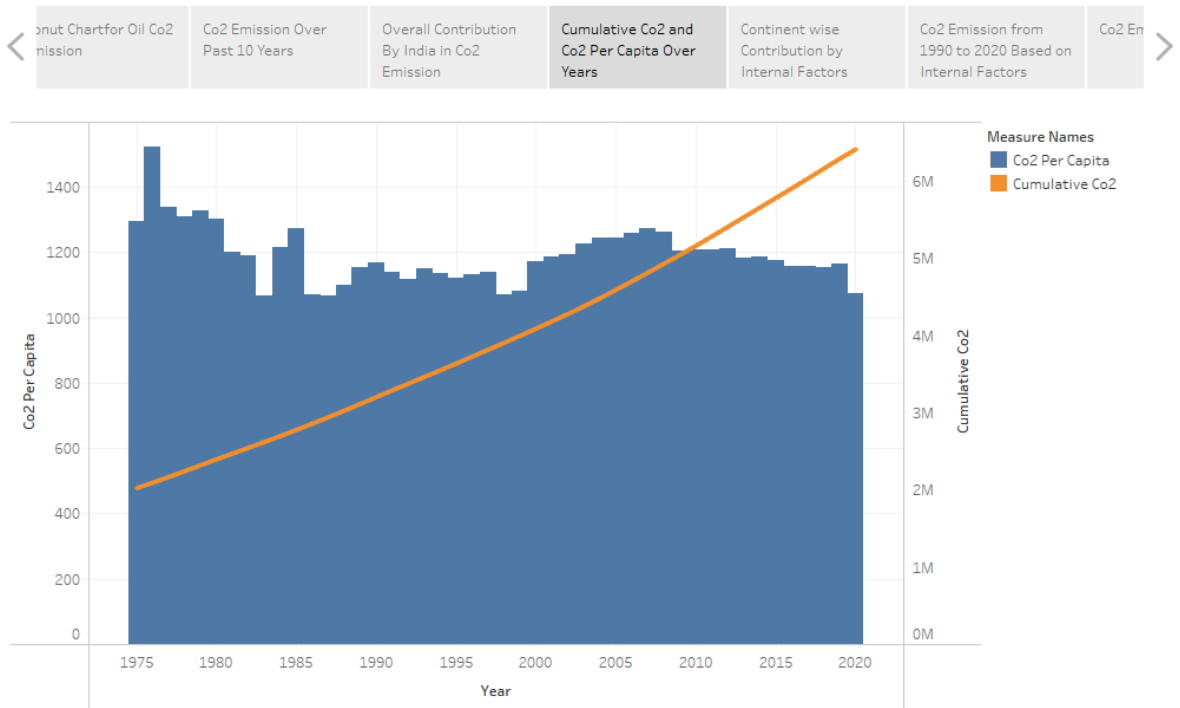
Co2 Emission Story



## Co2 Emission Story

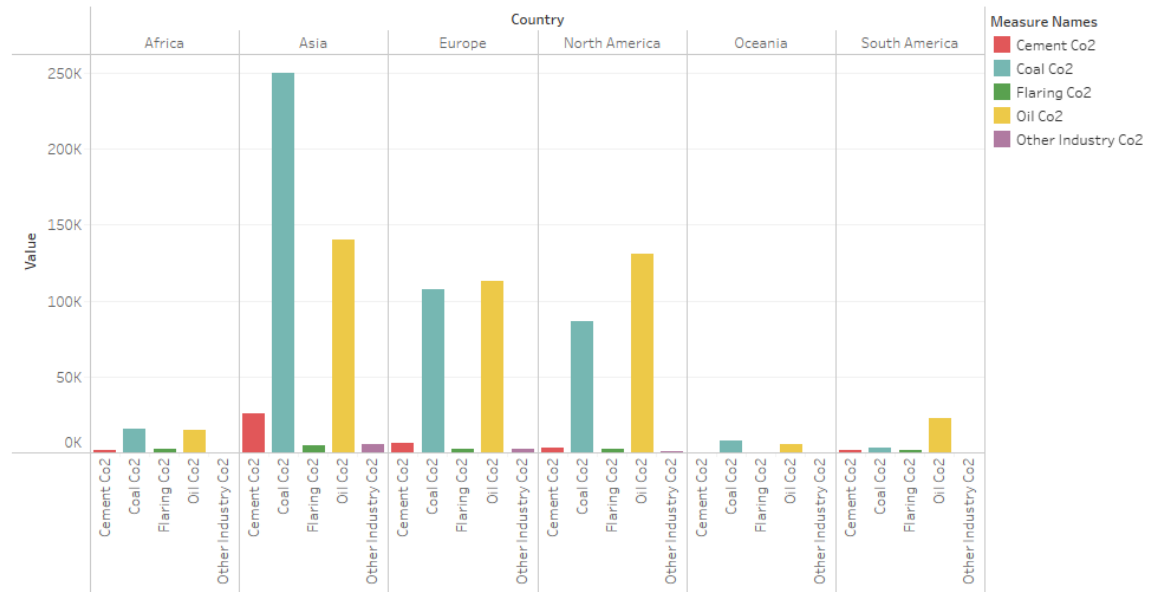
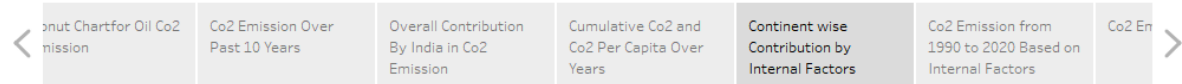


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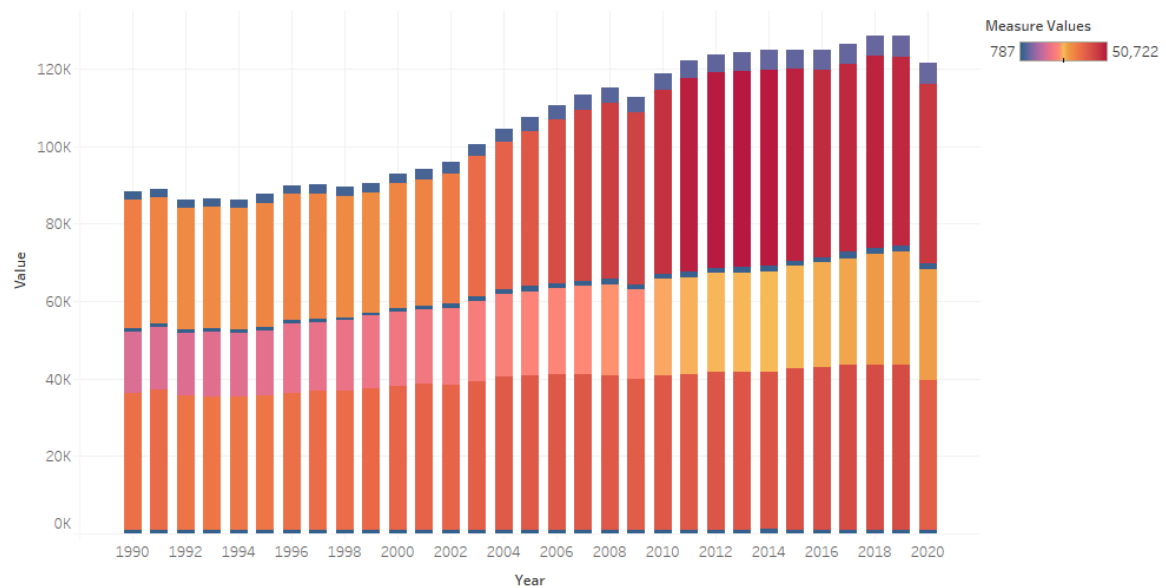
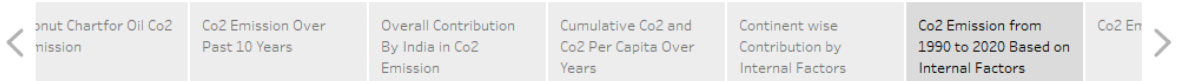




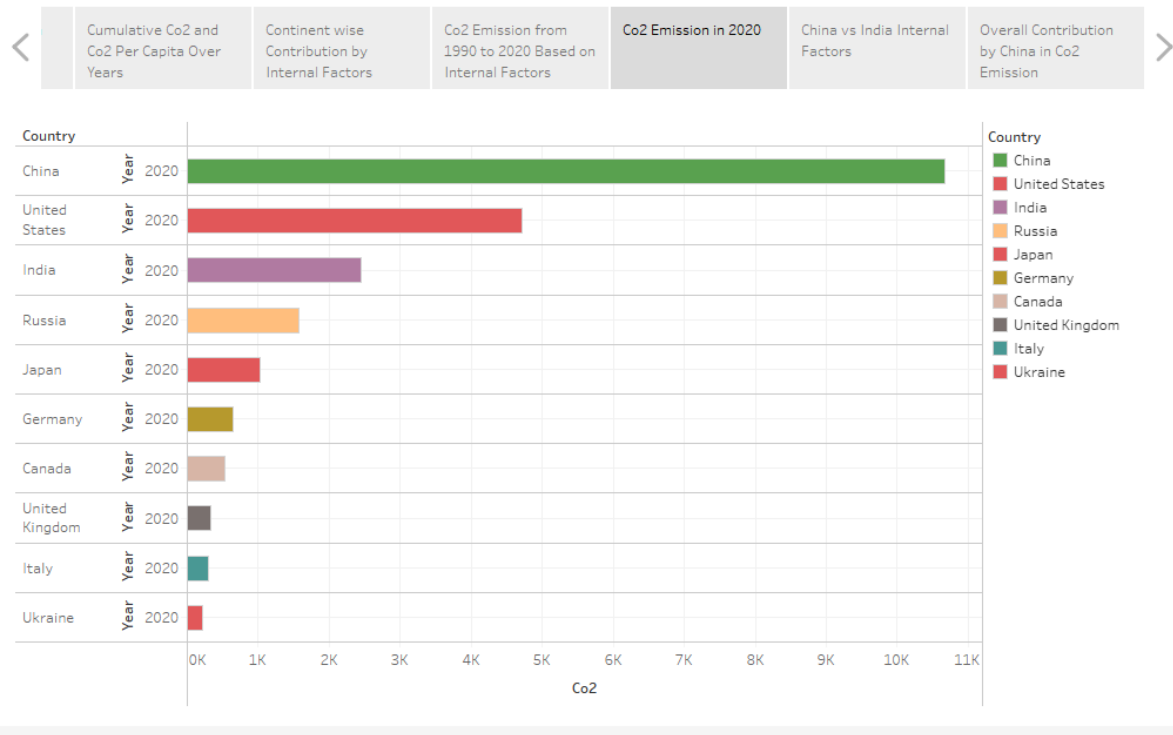
## Co2 Emission Story



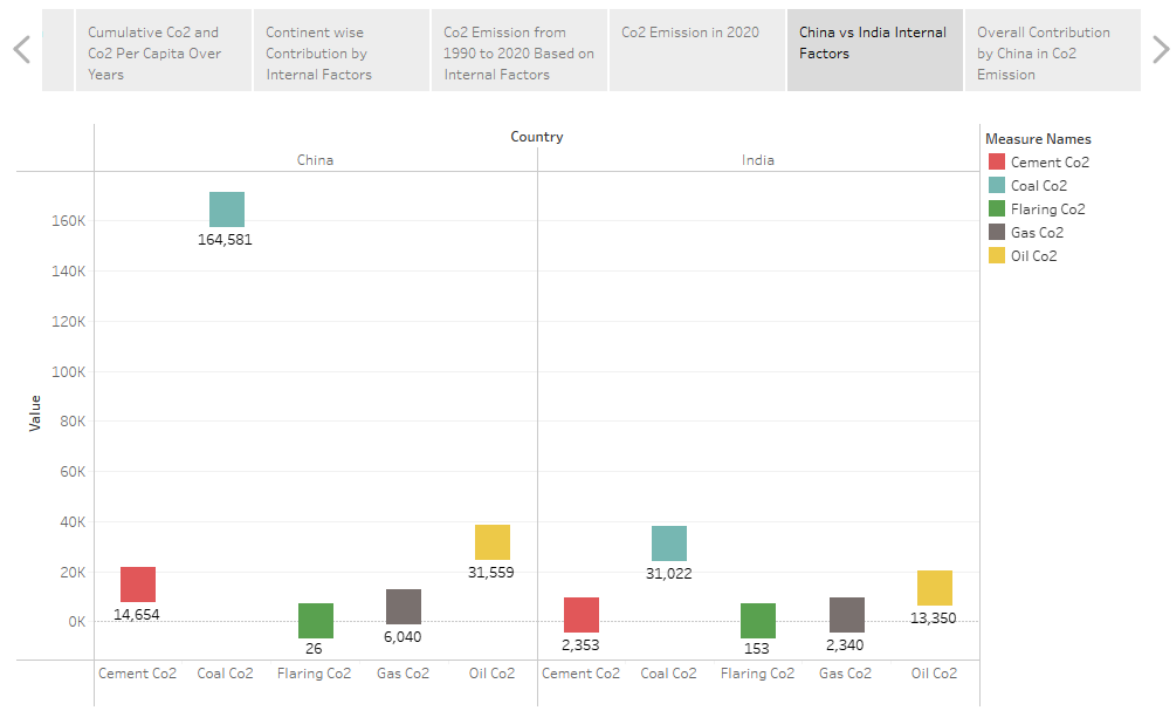
## Co2 Emission Story



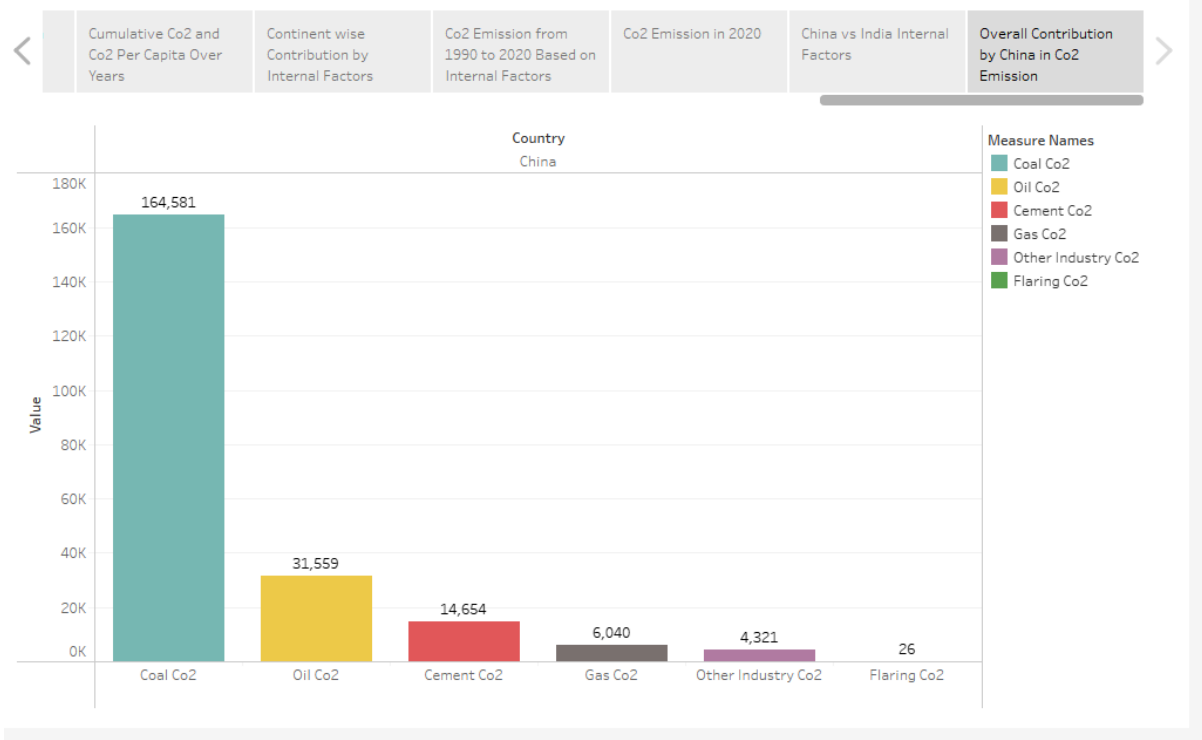
## Co2 Emission Story



## Co2 Emission Story



## Co2 Emission Story



## 4. ADVANTAGES

Green plants grow faster with more CO<sub>2</sub>. Many also become more drought – resistant because higher CO<sub>2</sub> levels allow plants to use water more efficiently. More abundant vegetation from increased CO<sub>2</sub> is already apparent. Because air pollution and greenhouse gases are often released from the same sources, cutting greenhouse gas emissions in an effort to slow climate change also reduces air pollutants, such as fine particulate matter. Reducing these co-emitted air pollutants improves air quality and benefits human health.

## DISADVANTAGES

Our carbon footprint has a negative impact on the environment in multiple ways: It is the main cause of human –induced climate change, it contributes to urban air pollution, it leads to toxic acid rain, it adds to coastal and ocean acidification, and it worsens the melting of glaciers and polar ice. High CO<sub>2</sub> levels, generally over 1000 ppm, indicate a potential problem with air circulation and fresh air in a room or building. In general, high CO<sub>2</sub> levels indicate the need to examine the HVAC system. High CO<sub>2</sub> levels can cause poor air quality and can even extinguish pilot lights on gas-powered appliance.

## **5. APPLICATION**

CO<sub>2</sub> use can support climate goals where the application is scalable, uses low-carbon energy and displaces a product with higher life-cycle emissions. Some CO<sub>2</sub>-derived products also involve permanent carbon retention, in particular building materials. A better understanding and improved methodology to quantify the life-cycle climate benefits of CO<sub>2</sub> use applications are needed. The market for CO<sub>2</sub> use is expected to remain relatively small in the short term, but early opportunities could be developed, especially those related to building materials. Public procurement of low-carbon products can help to create an early market for CO<sub>2</sub>-derived products and assist in the development of technical standards. In the long term, CO<sub>2</sub> sourced from biomass or the air could play a key role in a net-zero CO<sub>2</sub> emission economy, including as a carbon source for aviation fuels and chemicals.

## **6. CONCLUSION**

Analysis Global CO<sub>2</sub> Emission across countries from 1975 to 2020. This dataset contains a record of CO<sub>2</sub> Emission by each country and Region of earth, here is an analysis and visualization of CO<sub>2</sub> Emissions by country by region and overall on Earth.

## **7. FUTURE SCOPE**

There are lots of considerations beyond emissions alone – such as cost and practicality – but, to an extent, we can choose whether our fleet is low or zero emissions, we can determine how our buildings are warmed and a manufacturer can look at ways to reduce the carbon cost of its production processes. However, a soft drinks maker can't control how we will dispose of its plastic bottles, nor can an appliance manufacturer decree whether we use the most or least eco-friendly settings on our laundry machines. It's somewhat easier to quantify emissions for scopes. For energy use, for example, companies can source the data needed to convert direct purchases of gas and electricity into a value for the associated greenhouse gases.

## 8. APPENDIX

### A. SOUECE CODE

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

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

  <title>Global Co2 Emission Analysis</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 - v4.10.0
* 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 justify-content-between">

      <h1 class="logo"> </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="#dash">Dashboard</a></li>
    <li><a class="nav-link scrollto" href="#services">Story</a></li>
    <li><a class="nav-link scrollto" href="#portfolio">Visualizations</a></li>
    <li><a class="nav-link scrollto" href="#report">Report</a></li>
    <li><a class="nav-link scrollto" href="#contact">Contact</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>Welcome to Global Co2 Emission Analysis for Year 2020</h1>
        <h2>Carbon dioxide emissions are the primary driver of global climate change. It's widely recognised that to avoid the worst impacts of climate change, the world needs to urgently reduce emissions.</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/watch?v=jDDapla0z7Q" class="lightbox btn-watch-video"></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>

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

<main id="main">

  <!-- ===== Clients Section ===== -->

  <!-- End Clients Section -->

  <!-- ===== About Us Section ===== -->
  <section id="about" class="about">
    <div class="container">

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

      <div class="row content">
        <div class="col-lg-12">
          <p>
            Carbon dioxide emissions are those stemming from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring.
          </p>

```

```

        </p>
        <p>
            Global carbon dioxide (CO2) emissions from fossil fuels and industry have
            increased considerably since 2000, and in 2019 reached a record high of 36.7 billion metric tons of CO2. In
            2020, the COVID-19 pandemic caused global CO2 emissions to plummet five
            percent to 34.81 billion metric tons.</p>

        <p> Historically, major global events cause emission reductions. The 2009 global
        recession caused worldwide CO2 emissions to fall by approximately 460 million metric tons. But this pales in
        comparison to the emission reductions in
            2020. Countries around the world were put under strict lockdowns, meaning
            transportation and industrial activities were significantly reduced. CO2 emission levels in India dropped for
            the first time in four decades in the year
            ending March 2020. Global CO2 emissions per capita also experienced a substantial
            decline in 2020, falling to an average of 4.47 metric tons per person.</p>

    </div>
</div>

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

<!-- ===== Why Us Section ===== -->
<section id="dash" class="">
    <div class="container-fluid" data-aos="fade-up">
        <div class="section-title">
            <h2>Dashboard</h2>
        </div>

        <div class='tableauPlaceholder' id='viz1681629028814' style='position: relative'><noscript><a
href='#'><img alt='Dashboard 1 '
src='https://public.tableau.com/static/images/Co/Co2DemoDashboard/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='Co2DemoDashboard/1' /><param
name='tabs' value='no' /><param name='toolbar' value='yes' /><param name='static_image'
value='https://public.tableau.com/static/images/Co/Co2DemoDashboard/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('viz1681629028814');
                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='1877px';}
                var scriptElement =
                document.createElement('script');
                scriptElement.src =
                'https://public.tableau.com/javascripts/api/viz_v1.js';
                vizElement.parentNode.insertBefore(scriptElement, vizElement);
            </script>

        </div>

    <!-- End Why Us Section -->
    <section id="services" class="services">
        <div class="container" data-aos="fade-up">
            <div class="section-title">
                <h2>Story</h2>
            </div>

            <div class='tableauPlaceholder' id='viz1681629171021' style='position:
relative'><noscript><a href='#'><img alt='Co2 Emission Story '
src='https://public.tableau.com/static/images/Co/Co2DemoStory_16811160301870/1_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

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name='embed_code_version' value='3' /> <param name='site_root' value='' /><param name='name'
value='Co2DemoStory_16811160301870&#47;Co2EmissionStory' /><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;Co&#47;Co2DemoStory_16811160301870&#47;Co
2EmissionStory&#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>
type='text/javascript'>
    var divElement = document.getElementById('viz1681629171021');
    var vizElement = divElement.getElementsByTagName('object')[0];
    vizElement.style.width='1016px';vizElement.style.height='991px';
    document.createElement('script');
    scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
    vizElement.parentNode.insertBefore(scriptElement, vizElement);
</script>

</div>
</section>

<!-- ===== Skills Section ===== -->

<!-- End Skills Section -->

<!-- End Services Section -->

<!-- ===== Cta Section ===== -->

<!-- End Cta Section -->

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

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

        </div>

        <div class="row portfolio-container">

            <div class="col-lg-4 col-md-6 portfolio-item filter-web">
                <div class="portfolio-wrap">
                    
                    <div class="portfolio-info">
                        <h4>Image 1 </h4>

                        <div class="portfolio-links">
                            <a href="assets/img/portfolio/p1.jpg" data-gallery="portfolioGallery"
class="portfolio-lightbox" title="Web 3"><i class="bx bx-plus"></i></a>

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

            <div class="col-lg-4 col-md-6 portfolio-item filter-web">
                <div class="portfolio-wrap">
                    
                    <div class="portfolio-info">
                        <h4>Image 2 </h4>

                        <div class="portfolio-links">
                            <a href="assets/img/portfolio/p1.jpg" data-gallery="portfolioGallery"
class="portfolio-lightbox" title="Web 3"><i class="bx bx-plus"></i></a>

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

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        </div>
        <div class="col-lg-4 col-md-6 portfolio-item filter-web">
            <div class="portfolio-wrap">
                
                <div class="portfolio-info">
                    <h4>Image 3 </h4>

                    <div class="portfolio-links">
                        <a href="assets/img/portfolio/p1.jpg" data-gallery="portfolioGallery"
class="portfolio-lightbox" title="Web 3"><i class="bx bx-plus"></i></a>

                    </div>
                </div>
            </div>
        </div>
        <div class="col-lg-4 col-md-6 portfolio-item filter-web">
            <div class="portfolio-wrap">
                
                <div class="portfolio-info">
                    <h4>Image 5</h4>
                    <div class="portfolio-links">
                        <a href="assets/img/portfolio/p5.jpg" data-gallery="portfolioGallery"
class="portfolio-lightbox" title="Web 3"><i class="bx bx-plus"></i></a>
                    </div>
                </div>
            </div>
        </div>
        <div class="col-lg-4 col-md-6 portfolio-item filter-web">
            <div class="portfolio-wrap">
                
                <div class="portfolio-info">
                    <h4>Image 6</h4>
                    <div class="portfolio-links">
                        <a href="assets/img/portfolio/p5.jpg" data-gallery="portfolioGallery"
class="portfolio-lightbox" title="Web 3"><i class="bx bx-plus"></i></a>
                    </div>
                </div>
            </div>
        </div>
        <div class="col-lg-4 col-md-6 portfolio-item filter-web">
            <div class="portfolio-wrap">
                
                <div class="portfolio-info">
                    <h4>Image 4</h4>
                    <div class="portfolio-links">
                        <a href="assets/img/portfolio/p5.jpg" data-gallery="portfolioGallery"
class="portfolio-lightbox" title="Web 3"><i class="bx bx-plus"></i></a>
                    </div>
                </div>
            </div>
        </div>
    </div>

</div>
</section>
<section id="report" class="skills">
    <div class="container" data-aos="fade-up">
        <div class="section-title">
            <h2>Report</h2>

        </div>
        <div class="row content">
            <div class="col-md-5 order-1 order-md-2" data-aos="fade-right" data-aos-delay="100">
                
            </div>

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<div class="col-lg-6 pt-4 pt-lg-0 content" data-aos="fade-left" data-aos-delay="100">
  <h3>Top Co2 Emitting countries for Past 10 Years</h3>
  <br>
  <p class="fst-italic">
    China is the highest Co2 Emitting country among the other countries.
  </p>
  <p class="fst-italic">
    United States is the second highest Co2 Emitting country.
  </p>
  <p class="fst-italic">
    India is the Third highest Co2 Emitting country.
  </p>
</div>
</div>
<br>
<br>

<div class="row content">
  <div class="col-md-5" data-aos="fade-right">
    
  </div>
  <div class="col-md-7 pt-5" data-aos="fade-left">
    <h3>Continents Contribution towards Co2 Emission</h3>
    <br>
    <p class="fst-italic">
      Asian is the highest Co2 Emitting country among the other continents.
    </p>
    <p class="fst-italic">
      Europe is the second highest Co2 Emitting continent.
    </p>
    <p class="fst-italic">
      Antarctica is the lowest Co2 Emitting countries because of low human
activity/existence in the continent.
    </p>

  </div>
  <br>
  <br>
  <div class="row content">
    <div class="col-md-5" data-aos="fade-right">
      
    </div>
    <div class="col-md-7 pt-5" data-aos="fade-left">
      <h3>Overall India Contribution towards Co2 Emission</h3>
      <br>
      <p class="fst-italic">
        Coal is the highest factor of Co2 Emission.
      </p>
      <p class="fst-italic">
        Oil is the second highest Co2 Emitting factor.
      </p>
    </div>
  </div>
  <div class="row content">
    <div class="col-md-5 order-1 order-md-2" data-aos="fade-left">
      
    </div>
    <div class="col-md-7 pt-5 order-2 order-md-1" data-aos="fade-right">
      <h3>Overall Co2 Emission over time </h3>
      <br>
      <p class="fst-italic">
        Co2 Emission in 1975 was 67324 (in metric tons).
      </p>
      <p class="fst-italic">
        Co2 Emission in 2019 was 128423 (in metric tons) which was highest in the
past years.
      </p>
      <p class="fst-italic">

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        Co2 Emission in 2020 was found to be 121593 (in metric tons).
    </p>
</div>
</div>

</div>
</div>

</section>
<!-- End Portfolio Section -->

<!-- ===== Team Section ===== -->

<!-- End Team Section -->

<!-- ===== Pricing 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>SmartBridge, Hyderabad,AndhraPradesh, India</p>
                    </div>

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

                    <div class="phone">
                        <i class="bi bi-phone"></i>
                        <h4>Call:</h4>
                        <p>+11 1234 1234<br>+11 4321 4321</p>
                    </div>

                </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">

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

            </div>
        </div>

        <div class="container footer-bottom clearfix">
            <div class="copyright">
                &copy; Copyright <strong><span>Arsha</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/">Indra Prakash</a>
                <div class="social-links mt-3">
                    <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>

```

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        <a href="#" class="google-plus"><i class="bx bxl-skype"></i></a>
        <a href="#" class="linkedin"><i class="bx bxl-linkedin"></i></a>
    </div>
</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>
```