

Visualization Tool for Electric Vehicle Charge and Range Analysis

1. Introduction

Transport is a fundamental requirement of modern life, but the traditional combustion engine is quickly becoming outdated. The availability of fossil fuels is limited, and their use is destroying our planet. Toxic emissions from petrol and diesel vehicles lead to long-term, adverse effects on public health. Electric vehicles (EV) have emerged as a promising alternative to traditional internal combustion engine (ICE) vehicles, which generate zero emissions by using rechargeable batteries to substitute gasoline or diesel, are effective in reducing GHG pollution and oil consumption. EV use electric motors rather than fossil fuels for propulsion and typically store electric energy in lithium-ion cells. With rising concerns over fossil fuel depletion and the impact of ICE vehicles on the climate, electric mobility is widely considered as the future of sustainable transportation. EV promise to drastically reduce greenhouse gas emissions as a result of the transportation sector.

From an efficiency perspective, electric vehicles can convert around 60% of the electrical energy from the grid to power the wheels, but petrol or diesel cars can only convert 17%-21% of the energy stored in the fuel to the wheels. That is a waste of around 80%. Fully electric vehicles have zero tailpipe emissions, but even when electricity production is taken into account, petrol or diesel vehicles emit almost 3 times more carbon dioxide than the average EV. To reduce the impact of charging electric vehicles, India is ambitious to achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by the year 2030.

1.1 Overview

Electric Vehicle usage and markets are growing exponentially. However, mass adoption of EV faces major barriers due to consumer worries. We have to encourage the people to switch on to EV and EV manufacturers to improve key affecting factors. Hence, In our project we have downloaded the datasets relative to analyses the various factors of consumers worries and processing the data to visualize the insights. Then the visualization were provided through website as a visualization tool to analyse the Electric vehicle charge and range.

1.2 Purpose

With the help of this visualization tool we providing insights from our analysis to make the people switch on to electric vehicle by eliminate their worries in EV sector and also it make EV manufacturer to improve key affecting factors in their sectors.

2. Problem Definition & Design Thinking

2.1 Empathy map



2.2 Ideation & Brainstorming Map

1

Problem statement

Electric Vehicle usage and markets are growing exponentially. Though EV gives more benefits, people has hesitation in changing to EV. This hesitation arise due to lack of knowledge in battery capacity,charging method and duration, mileage of EV, price, charging station, capacity of EV, choose efficient EV and available models in numerous brands. We have to encourage the people to switch on to EV and EV manufacturers to improve key affecting factors by providing visualized information from analysis to make decision.

2

Brainstorm

Ideas that come to mind that address the problem statement.

Velliyangiri P	Velleswaran P	Arul Prasanth C.A	Manoj Kumar S
Analysing Charging stations in India	show the types of EV cars for people to choose according to their need	Give price range availability in EV	figure out the efficient EV
Listing different brands and models in India	To let people know the benefits of EV	provide details of Speed and Range	Location of Charging stations with map
		catalogue the bodystyles of different brands	Capacity and bootspace availability in EV
			let them know the types of charging
			Listing different brands and models available in world market

3

Group Ideas

clustering similar ideas into groups

Brands and Models

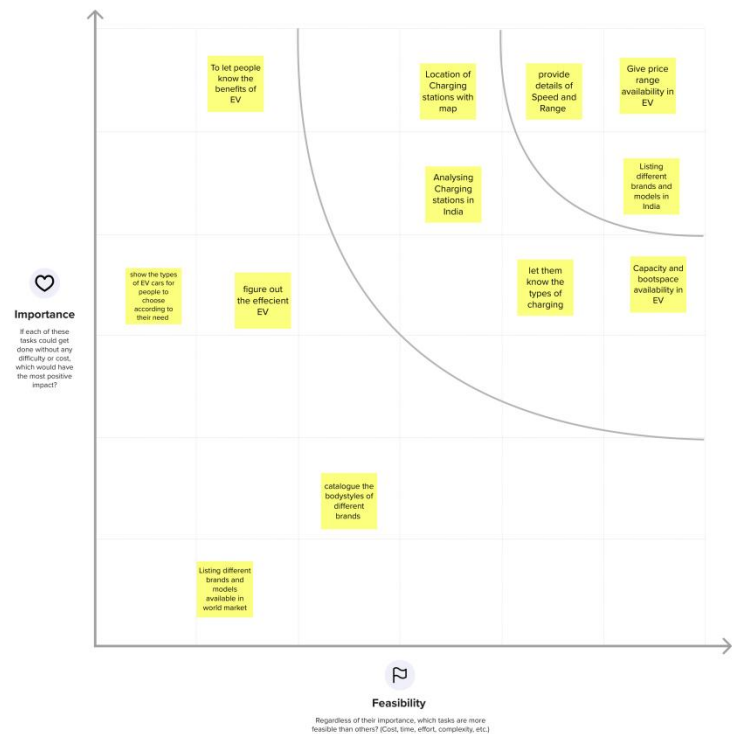
Listing different brands and models in India	Listing different brands and models available in world market	show the types of EV cars for people to choose according to their need	To let people know the benefits of EV	Give price range availability in EV	Capacity and bootspace availability in EV	catalogue the bodystyles of different brands
price and features						
Performance						
Analysing Charging stations in India	let them know the types of charging	Location of Charging stations with map	provide details of Speed and Range	figure out the efficient EV		

Charging

4

Prioritize

Grouped ideas are prioritized on the basis of importance



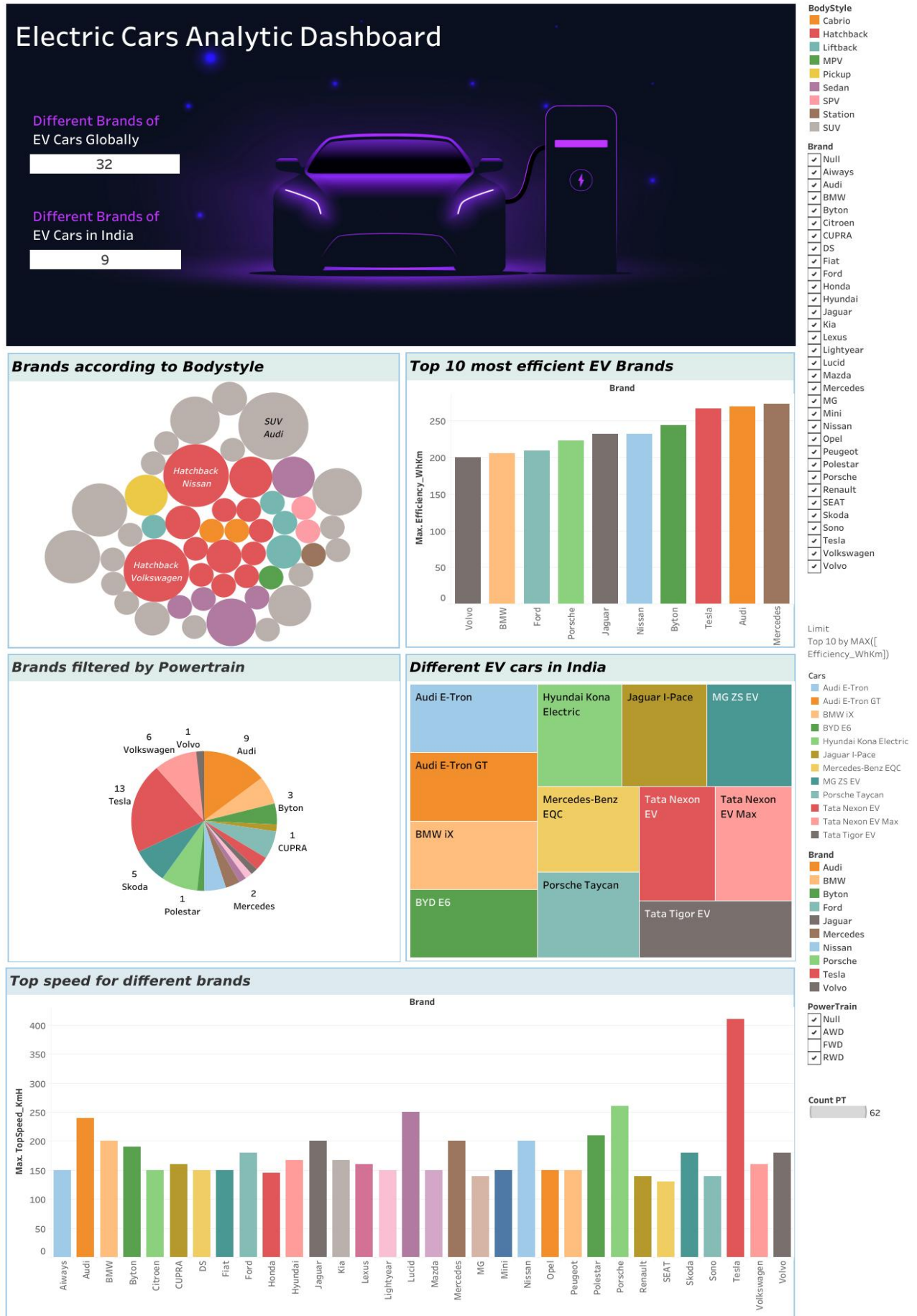
3. Result

Final outputs of our analysis related to consumer worries that have determined by empathy map, Ideation and brainstorming, they are

1. Charging Stations by region and type in India
2. EV Charging stations map of India
3. Different EV cars in India
4. Top speed for different Brands
5. Price for different cars in India
6. Top 10 most efficient EV Brands
7. Brands according to Body style
8. Brand filtered by Power Train type
9. No of models by each brand
10. Summary card for Different brands of EV Cars globally
11. Summary card for Different brands of EV Cars in India

Dashboard

Dashboards are often used to provide real-time monitoring and analysis of data, and are typically designed for a specific purpose or use case. In our project we designed dashboard with combined visualization of our analysis.

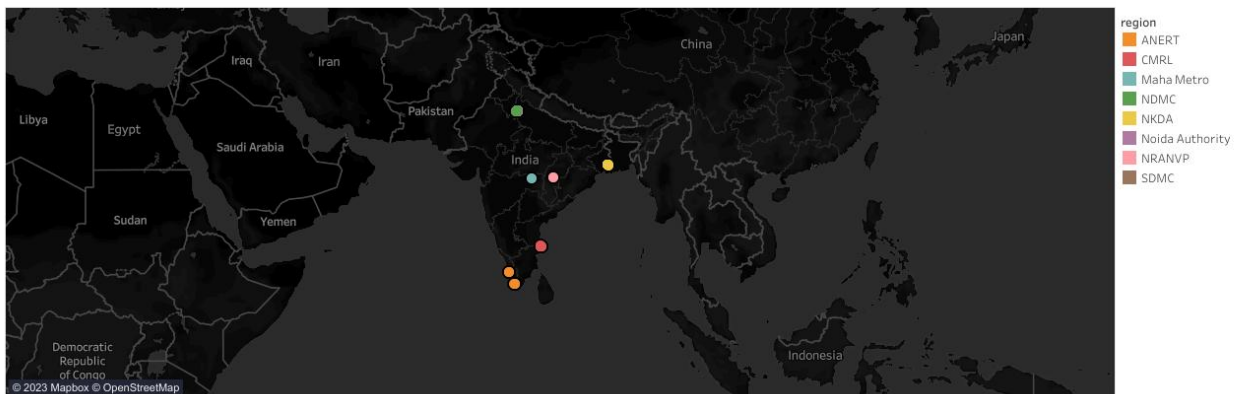


Story

A data story is a way of presenting data and analysis in a narrative format, with the goal of making the information more engaging and easier to understand.

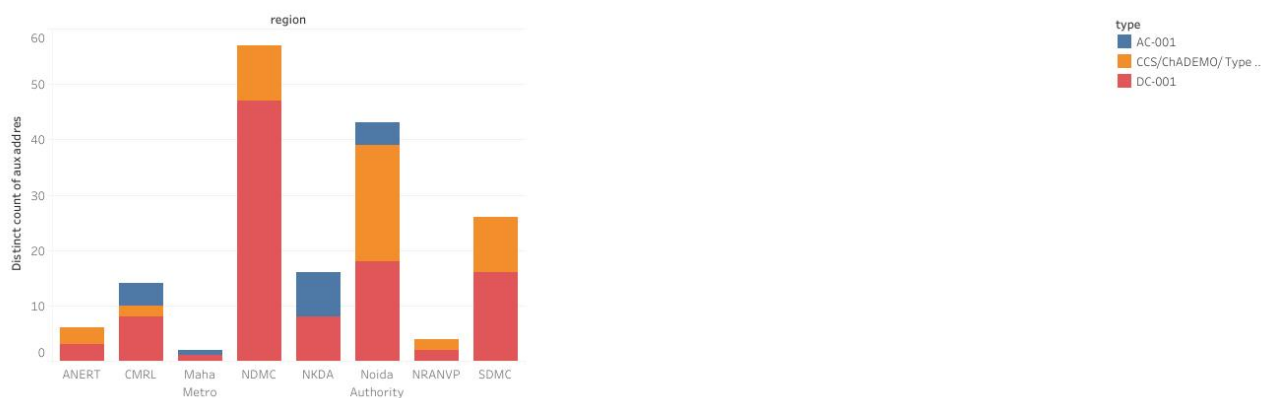
Story of Electric cars in India

Charging Stations in India	Charging Station by region and type	Price of Electric cars by different brands	Different Brands and No of Models
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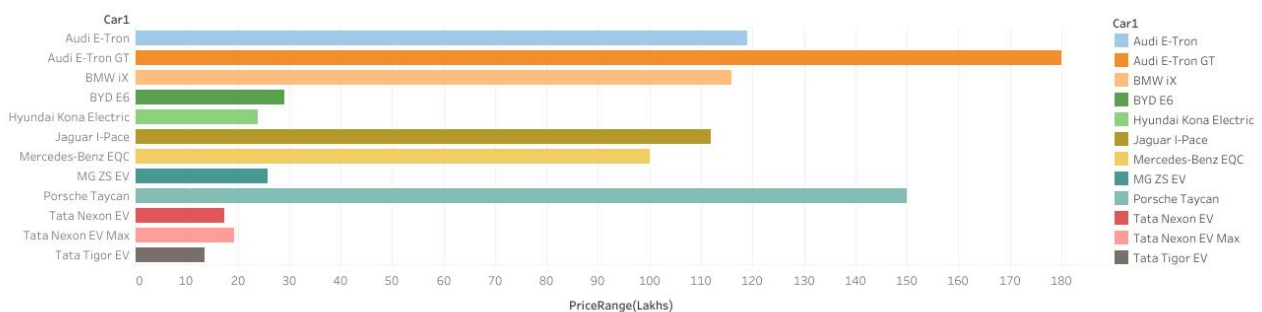
Story of Electric cars in India

Charging Stations in India	Charging Station by region and type	Price of Electric cars by different brands	Different Brands and No of Models
----------------------------	-------------------------------------	--	-----------------------------------



Story of Electric cars in India

Charging Stations in India	Charging Station by region and type	Price of Electric cars by different brands	Different Brands and No of Models
----------------------------	-------------------------------------	--	-----------------------------------

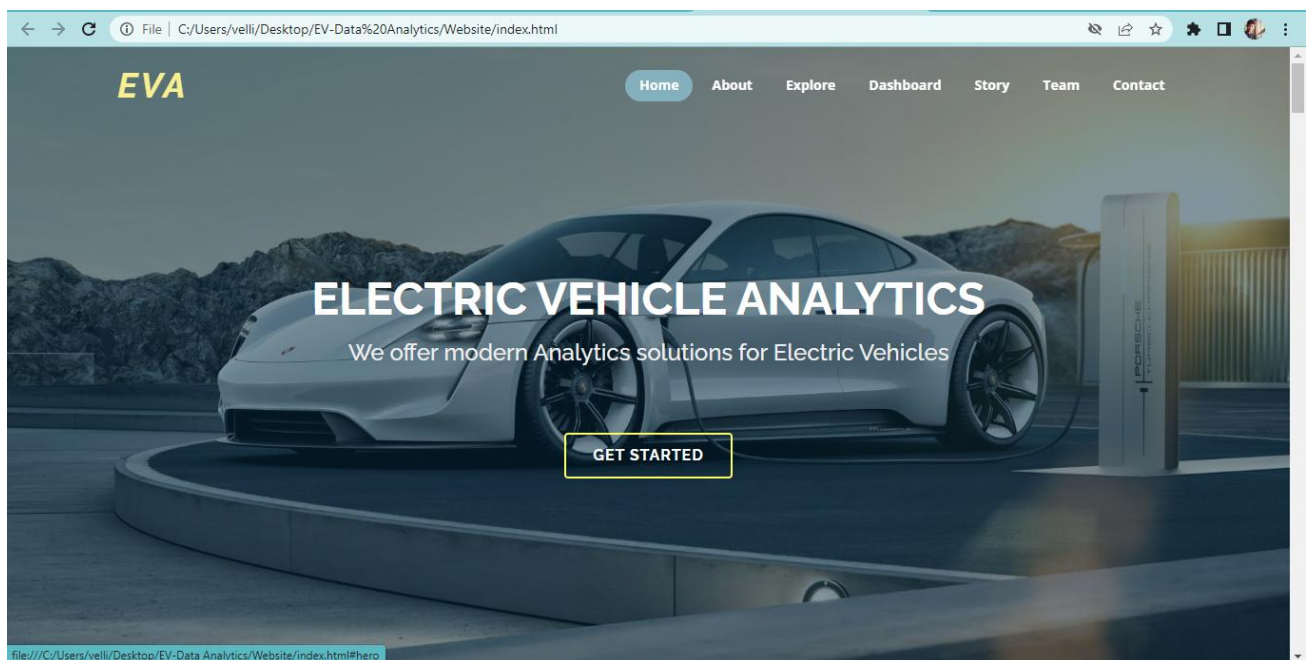


Story of Electric cars in India



Web Integration

Through this web integration with HTML, CSS and Bootstrap we have developed a visualization tools to give insights about Electric vehicle charge, price, range and charging station analysis.



EVA

EVA is a complete analytics tool for electric vehicle all over the world

The Electric Vehicle (EV) is not new, but it has been receiving significantly more attention in recent years. Advances in both EV analytics and battery technologies have led to increased automotive market share. However, this growth is not attributed to hardware alone. The modern mechatronic vehicle marries electrical storage and propulsion systems with electronic sensors, controls, and actuators, integrated closely with software, secure data transfer, and data analysis, to form a comprehensive transportation solution. Advances in all these areas have contributed to the overall rise of EVs, but the common thread that runs through all these elements is data analytics.

In our EVA website, Its **Electric Vehicle Analysis service provides qualitative and quantitative insights into the EV sector. We post various visualization it guides manufacturing companies where to improve, make the people to know better about EVs and allow them to choose which EV will be their suitable companion..**

In addition to our website we are working on to provide live customer guiding service to make their choice best.



Why EV?



Overview of Electric Vehicle Sector

The supply of fossil fuels is constantly decreasing. The situation is very alarming. It is time for the world to slowly adapt to electric vehicles.

✓ A lot of changes needs to happen

Major carmakers like Tesla and Porsche manufacture many electric vehicles.

✓ The improvement of battery technology in recent years can lead to the higher popularity of electric vehicles

Benefits of EV

✓ Lower running costs

The running cost of an electric vehicle is much lower than an equivalent petrol or diesel vehicle. Electric vehicles use electricity to charge their batteries instead of using fossil fuels like petrol or diesel. Electric vehicles are more efficient, and charging an electric vehicle is cheaper than filling petrol or diesel for your travel requirements. Using renewable energy



Benefits of EV

✓ Lower running costs

The running cost of an electric vehicle is much lower than an equivalent petrol or diesel vehicle. Electric vehicles use electricity to charge their batteries instead of using fossil fuels like petrol or diesel. Electric vehicles are more efficient, and charging an electric vehicle is cheaper than filling petrol or diesel for your travel requirements. Using renewable energy sources can make the use of electric vehicles more eco-friendly. The electricity cost can be reduced further if charging is done with the help of renewable energy sources installed at home, such as solar panels.

✓ Lower maintenance costs

Electric vehicles have very low maintenance costs because they don't have as many moving parts as an internal combustion vehicle. The servicing requirements for electric vehicles are lesser than the conventional petrol or diesel vehicles. Therefore, the yearly cost of running an electric vehicle is significantly low.

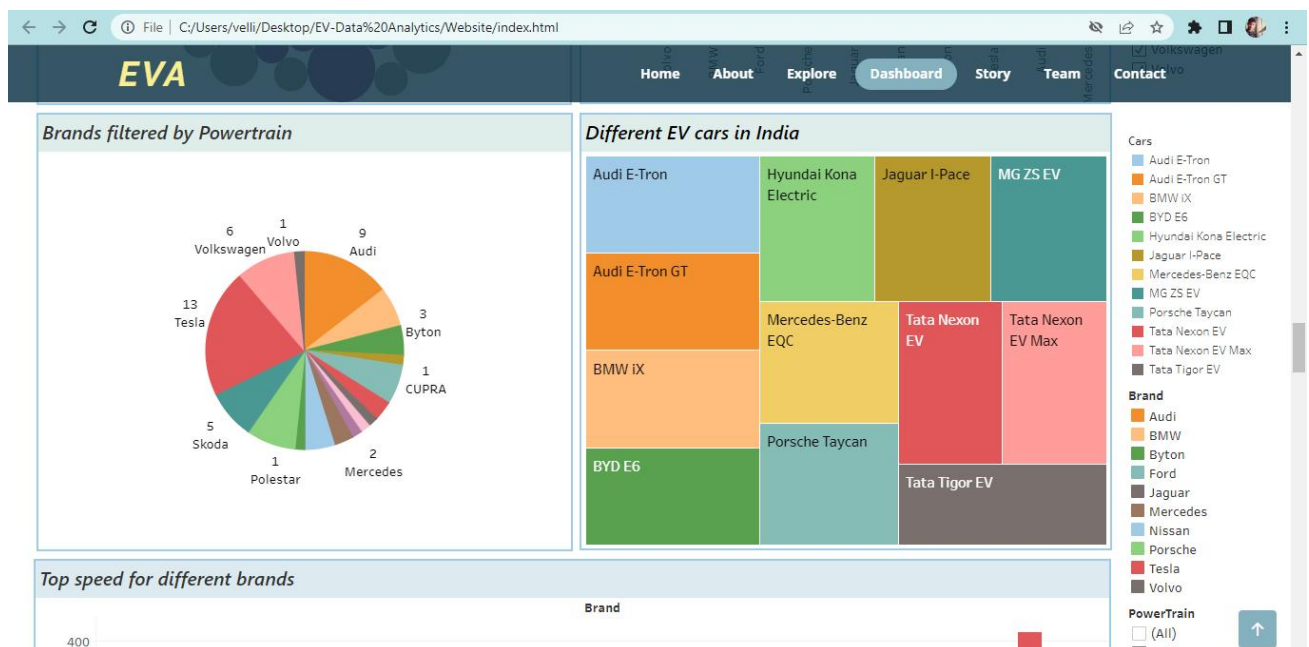
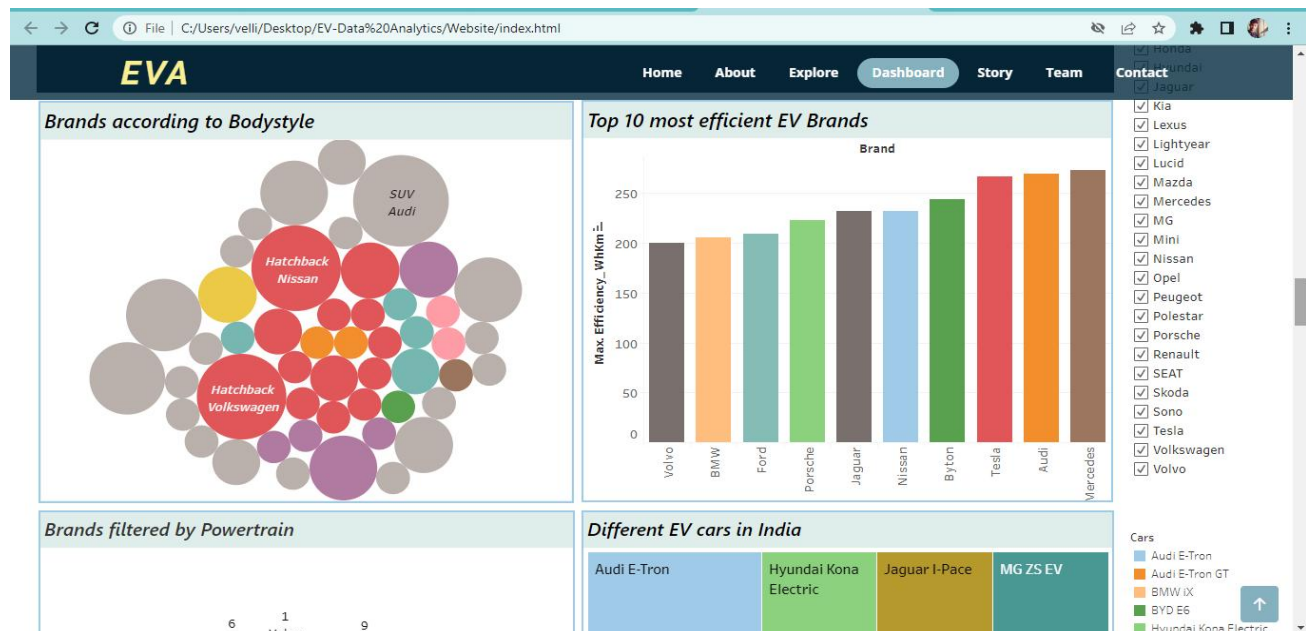
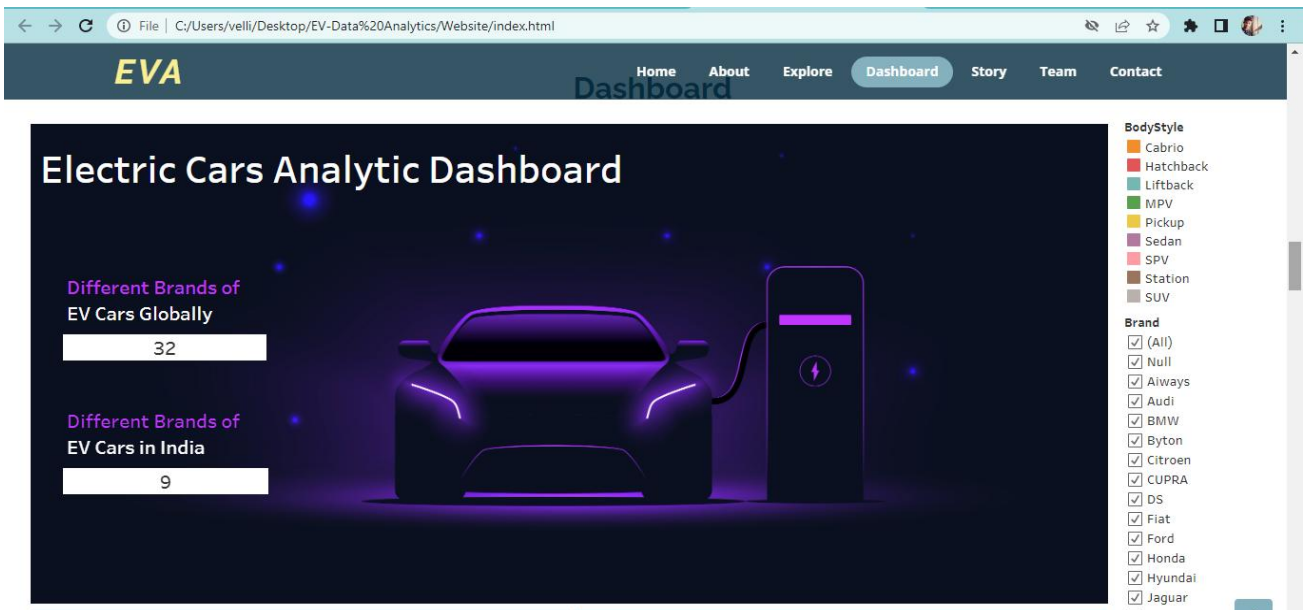
✓ Zero Tailpipe Emission

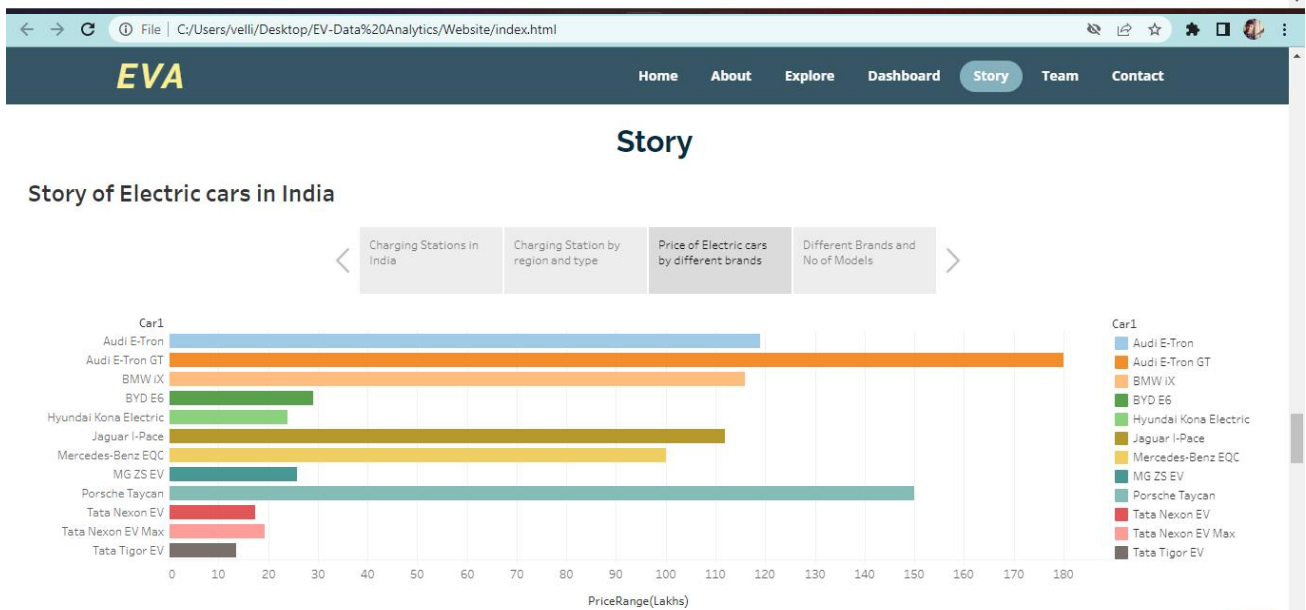
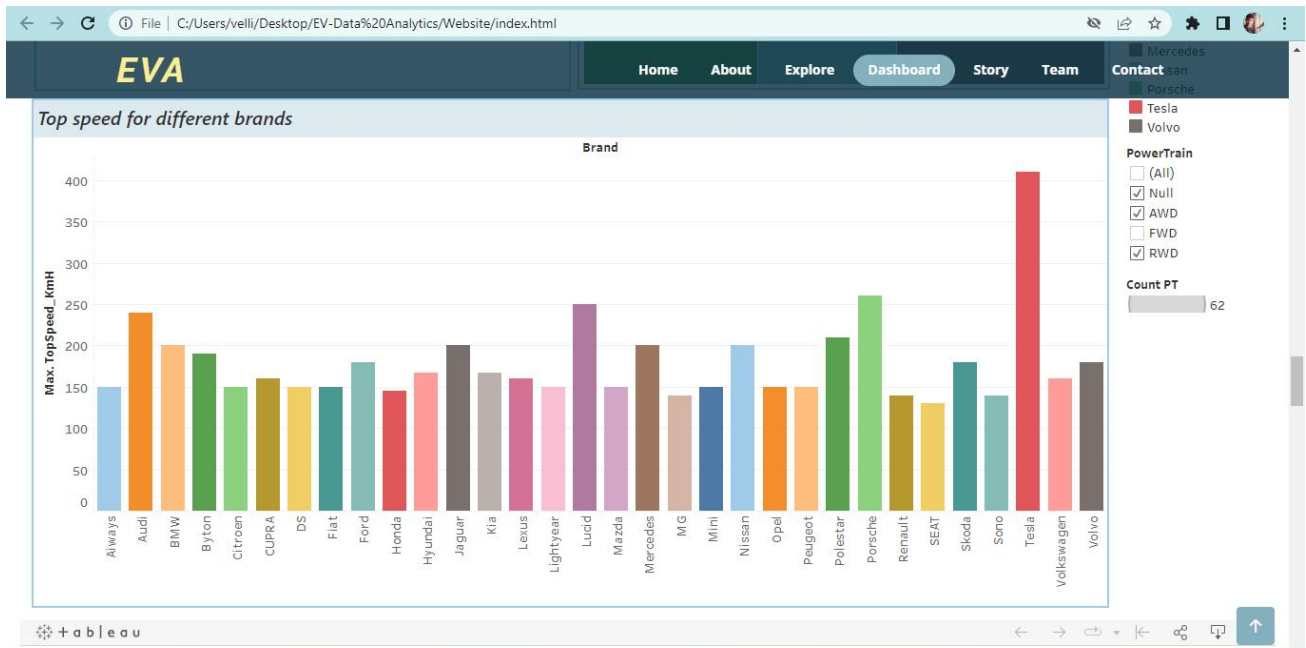
Driving an electric vehicle can help you reduce your carbon footprint because there will be zero tailpipe emissions. You can reduce the environmental impact of charging your vehicle further by choosing renewable energy options for home electricity.

✓ Tax and financial benefits

Registration fees and road tax on purchasing electric vehicles are lesser than petrol or diesel vehicles. There are multiple policies and incentives offered by the government depending on which state you are in. To find out more about electric vehicle incentives, click below.







My Drive - Google Drive | EVA-webpage

File | C:/Users/velli/Desktop/EV-Data%20Analytics/Website/index.html

EVA

Home About Explore Dashboard Story Team **Contact**

Location: Sri Vasavi College, Erode, Tamil Nadu-638316.

Email: evareview@gmail.com, vellyangiri1602@gmail.com

Call: +91 9865 4264 54, +91 8525 0945 48

Your Name

Your Email

Subject

Message

Send Message

4. Advantages and Disadvantages

Advantages:

- This visualization tool will make the people encourage to switch on to EV sector.
- It enhance the users to know about all available brands and its price and configuration in one place with great visuals.
- It provide location of Charging station in India, it will make EV users to know the availability of their charging stations.
- By encouraging them to switch on to EV, we reduce the uses of fossil fuels, GHG emission and control climate affecting factors.
- These analytics gives insight to manufacturers where to improve their key affecting factor and make their brands to be competitive one in market .

Disadvantages:

- Even though it provide insights about EV, EV is higher purchase cost compare to normal ICE vehicles.
- It has long charging time and it has lower resale value.
- By our visuals we came to see that inadequate Charging stations. This is one of the major disadvantages among consumers.
- Like charging stations, we also have the inconvenience of service stations.
- These visualization tool can make the certain brands will face the sales drop in the market because of their lower configuration among the other brands.

5. Applications

- ✓ We have use this visualization to enhance their decision in choosing EV.
- ✓ Providing the insights like this will easy for comparison for user to analyse their desire factors accordingly.
- ✓ It shows the price details comparatively and will help to know more about the prices of EV among the people.
- ✓ It also gives the chart of efficient Electric cars those are available in market, the top speed charts of different brands, Body styles availability and powertrains of different brands. These visuals will initiate the manufacturers to make their products better to be competitive.

- ✓ In specifically we provided the Brands, models, price range and charging stations availability in India, It will make the other brands and manufacturers to start their market in India and help the Indians to choose their companion in EV.

6. Conclusion

Referred lot about Electric vehicle and by undertaking the Literature survey, creating empathy mapping and brainstorming we have pickup the people worries and we worked to resolve it. With the output of our work we have conclude that its best alternative to ICE but it quite expensive to buy for average people. By the visuals we analyzed we noted that inadequate charging stations situations are exist. So the people are recommended to switch on to EV while considering the environment affecting factors and also Car/Battery manufacturers are advised try to reduce their costs.

7. Future Scope

In future we extend our project with add up the visuals of how the maintenance cost of EV is better then ICE,market analysis of Electric vehicles sales, Environmental change due to the usage of EVs, Give the information about the data read by EV, Service stations locators and analysis of Battery performance in each brands and models, .

8. Appendix

Source code

HTML

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

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

  <title>EVA-webpage</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="assets/img/eva.png" rel="icon">
  <link href="assets/img/eva.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|Raleway:300,300i,400,400i,500,500i,600,600i,700,700i|Poppins:300,300i,400,400i,50
0,500i,600,600i,700,700i|Courgette|Quicksand" rel="stylesheet">

  <!-- Vendor CSS Files -->
  <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">
</head>

<body>

  <!-- ===== Header ===== -->
  <header id="header" class="fixed-top d-flex align-items-center header-transparent">
    <div class="container d-flex align-items-center justify-content-between">
      <div class="logo">
        <a href="index.html"></a>
        <h1><a href="index.html"><b><i>EVA</i></b></a></h1>
      </div>

      <nav id="navbar" class="navbar">
        <ul>
```



```

        <li><a class="nav-link scrollto active" href="#home"><b>Home</b></a></li>
        <li><a class="nav-link scrollto" href="#about"><b>About</b></a></li>
        <li><a class="nav-link scrollto" href="#overview"><b>Explore</b></a></li>
        <li><a class="nav-link scrollto" href="#dashboard"><b>Dashboard</b></a></li>
        <li><a class="nav-link scrollto " href="#story"><b>Story</b></a></li>
        <li><a class="nav-link scrollto" href="#team"><b>Team</b></a></li>
        <li><a class="nav-link scrollto" href="#contact"><b>Contact</b></a></li>
    </ul>
    <i class="bi bi-list mobile-nav-toggle"></i>
</nav><!-- .navbar -->

```

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

```

```

<!-- ===== Home Section ===== -->

```

```

<section id="home">
    <div class="home-container">
        <h1>Electric Vehicle Analytics</h1>
        <h2>We offer modern Analytics solutions for Electric Vehicles</h2>
        <a href="#about" class="btn-get-started scrollto"><b>Get Started</b></a>
    </div>
</section><!-- End Home -->

```

```

<main id="main">

```

```

    <!-- ===== About Section ===== -->

```

```

    <section id="about" ><div class="content">
        <h2>EVA</h2>
        <h3>EVA is a complete analytics tool for electric vehicle all over the
world</h3>
        <p>The Electric Vehicle (EV) is not new, but it has been receiving significantly
more attention in recent
years. Advances in both EV analytics and battery technologies have led to increased
automotive
market share. However, this growth is not attributed to hardware alone. The modern
mechatronic
vehicle marries electrical storage and propulsion systems with electronic sensors, controls,
and
actuators, integrated closely with software, secure data transfer, and data analysis, to form a
comprehensive transportation solution. Advances in all these areas have contributed to the
overall
rise of EV's, but the common thread that runs through all these elements is data
analytics.<br>

```

```

        In our EVA website, Its <b>Electric Vehicle Analysis service provides
qualitative and quantitative insights into the EV sector. We post various visualization it
guides manufacturing companies where to improve, make the people to know better about
EVs and allow them to choose which EV will be their suitable companion.</b>.<br>In
addition to our website we are working on to provide live customer guiding service to make
their choice best. </p>

```

```

    </div>

```

</section>

<!--===== Overview section =====>

<section id="overview">

<h2>Why EV?</h2>

<div class="vcontent">

<h3>Overview of Electric Vehicle Sector</h3>

<p>The supply of fossil fuels is constantly decreasing. The situation is very alarming. It is time for the world to slowly adapt to electric vehicles.</p>

 A lot of changes needs to happen

<p>Major carmakers like Tesla and Porsche manufacture many electric vehicles.</p>

 The improvement of battery technology in recent years can lead to the higher popularity of electric vehicles

</div>

</section>

<!--End Overview Section-->

<!--===== Benefits in Overview section =====>

<section id="benefits">

<div class="bcontent">

<h3>Benefits of EV</h3>

<h4>Lower running costs</h4>

<h6>The running cost of an electric vehicle is much lower than an equivalent petrol or diesel vehicle. Electric vehicles use electricity to charge their batteries instead of using fossil fuels like petrol or diesel. Electric vehicles are more efficient, and charging an electric vehicle is cheaper than filling petrol or diesel for your travel requirements. Using renewable energy sources can make the use of electric vehicles more eco-friendly. The electricity cost can be reduced further if charging is done with the help of renewable energy sources installed at home, such as solar panels.</h6>

<h4>Lower maintenance costs</h4>

<p>Electric vehicles have very low maintenance costs because they don't have as many moving parts as an internal combustion vehicle. The servicing requirements for electric vehicles are lesser than the conventional petrol or diesel vehicles. Therefore, the yearly cost of running an electric vehicle is significantly low.</p>

<h4>Zero Tailpipe Emission</h4>

<p>Driving an electric vehicle can help you reduce your carbon footprint because there will be zero tailpipe emissions. You can reduce the environmental impact of charging your vehicle further by choosing renewable energy options for home electricity.</p>

<h4>Tax and financial benefits</h4>

<p>Registration fees and road tax on purchasing electric vehicles are lesser than petrol or diesel vehicles. There are multiple policies and incentives offered by the government depending on which state you are in. To find out more about electric vehicle incentives, click below.</p>

<h4>Easy to drive and quiet </h4>

<p>Electric vehicles don't have gears and are very convenient to drive. There are no complicated controls, just accelerate, brake, and steer. When you want to charge your vehicle, just plug it in to a home or public charger. Electric vehicles are also quiet, so they reduce noise pollution that traditional vehicles contribute to.</p>

</div>

</section>

<!--End Benefits Section-->

<!--===== Dashboard Section =====>

<section id="dashboard"> <div class="align">

<h2>Dashboard</h2>

<div class='tableauPlaceholder' id='viz1680843234805' style='position: relative'><noscript></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='EVDashboard_16808431966400/Dashboard1' /><param name='tabs' value='no' /><param name='toolbar' value='yes' /><param name='static_image' value='https://public.tableau.com/static/images/EV/EVDashboard_16808431966400/Dashboard1/1.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('viz1680843234805');
var vizElement = divElement.getElementsByTagName('object')[0];
if (divElement.offsetWidth > 800) {
vizElement.style.width='1320px';vizElement.style.height='2027px';
} else if (divElement.offsetWidth > 500) {
vizElement.style.width='1320px';vizElement.style.height='2027px';
} else {
vizElement.style.width='100%';vizElement.style.height='2777px';
}
var scriptElement = document.createElement('script');
scriptElement.src = 'https://public.tableau.com/javascripts/api/viz_v1.js';
vizElement.parentNode.insertBefore(scriptElement, vizElement);
</script>

</div>

</div>

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

<!--===== Story Section =====>

<section id="story"><div class="align">

<h2>Story</h2>

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value='3' /> <param name='site_root' value="" /><param name='name'
value='EVChargeandrangeanalysis&#47;Story1' /><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;EV&#47;EVCharg
eandrangeanalysis&#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'
/></object></div> <script type='text/javascript'> var
divElement = document.getElementById('viz1680746510896'); var
vizElement = divElement.getElementsByTagName('object')[0];
vizElement.style.width='1320px';vizElement.style.height='591px'; var
scriptElement = document.createElement('script'); scriptElement.src =
'https://public.tableau.com/javascripts/api/viz_v1.js';
vizElement.parentNode.insertBefore(scriptElement, vizElement); </script>
</div>
</div>
</section>
<!--===== End Story Section ===== -->

<!--===== Team Section ===== -->
<section id="team" class="team section-bg">
<div class="container">

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

<div class="row">

<div class="col-lg-3 col-md-6 d-flex align-items-stretch">
<div class="member">
<div class="member-img">

<div class="social">
<a href=""><i class="bi bi-twitter"></i></a>
<a href=""><i class="bi bi-facebook"></i></a>
<a href=""><i class="bi bi-instagram"></i></a>
<a href=""><i class="bi bi-linkedin"></i></a>
</div>
</div>
<div class="member-info">
<h4>Velliyangiri</h4>
<span>Team Lead</span>
</div>
</div>
</div>

<div class="col-lg-3 col-md-6 d-flex align-items-stretch">
<div class="member">

```



```

<div class="member-img">
  
  <div class="social">
    <a href=""><i class="bi bi-twitter"></i></a>
    <a href=""><i class="bi bi-facebook"></i></a>
    <a href=""><i class="bi bi-instagram"></i></a>
    <a href=""><i class="bi bi-linkedin"></i></a>
  </div>
</div>
<div class="member-info">
  <h4>Veileswaran</h4>
  <span>Member 1</span>
</div>
</div>
</div>

```

```

<div class="col-lg-3 col-md-6 d-flex align-items-stretch">
  <div class="member">
    <div class="member-img">
      
      <div class="social">
        <a href=""><i class="bi bi-twitter"></i></a>
        <a href=""><i class="bi bi-facebook"></i></a>
        <a href=""><i class="bi bi-instagram"></i></a>
        <a href=""><i class="bi bi-linkedin"></i></a>
      </div>
    </div>
    <div class="member-info">
      <h4>Arulprasanth</h4>
      <span>member 2</span>
    </div>
  </div>
</div>

```

```

<div class="col-lg-3 col-md-6 d-flex align-items-stretch">
  <div class="member">
    <div class="member-img">
      
      <div class="social">
        <a href=""><i class="bi bi-twitter"></i></a>
        <a href=""><i class="bi bi-facebook"></i></a>
        <a href=""><i class="bi bi-instagram"></i></a>
        <a href=""><i class="bi bi-linkedin"></i></a>
      </div>
    </div>
    <div class="member-info">
      <h4>Manoj Kumar</h4>
      <span>Member 3</span>
    </div>
  </div>
</div>

```

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

<!-- ===== Contact Section ===== -->
<section id="contact" class="contact section-bg">
    <div class="container">

        <div class="section-title">
            <h2>Contact</h2>
            <!--<p>Magnam dolores commodi suscipitua fugiat sit in iste officiis commodi
quidem hic quas.</p>-->
        </div>
    </div>
    <div class="map">
        <iframe style="border:0; width: 100%; height: 350px;"
src="https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1d427.2186277119886!2
d77.67494703670036!3d11.416714036886939!2m3!1f0!2f0!3f0!3m2!1i1024!2i768!4f13.1!3
m3!1m2!1s0x3ba969260eccf263%3A0x4b98ca1658dba96b!2sDepartment%20of%20Math
ematics%2C%20Sri%20Vasavi%20College!5e0!3m2!1sen!2sin!4v1680708482986!5m2!1s
en!2sin" width="600" height="450" style="border:0;" allowfullscreen="" loading="lazy"
referrerpolicy="no-referrer-when-downgrade"></iframe>
allowfullscreen></div>
    </div>
    <div class="container">
        <div class="row mt-5 justify-content-center">
            <div class="col-lg-10">
                <div class="info-wrap">
                    <div class="row">
                        <div class="col-lg-4 info">
                            <i class="bi bi-geo-alt"></i>
                            <h4>Location:</h4>
                            <p>Sri Vasavi College,Erode,<br>Tamil Nadu-638316.</p>
                        </div>

                        <div class="col-lg-4 info mt-4 mt-lg-0">
                            <i class="bi bi-envelope"></i>
                            <h4>Email:</h4>
                            <p>evareview@gmail.com<br>velliyangiri1602@gmail.com</p>
                        </div>

                        <div class="col-lg-4 info mt-4 mt-lg-0">
                            <i class="bi bi-phone"></i>
                            <h4>Call:</h4>
                            <p>+91 9865 4264 54<br>+91 8525 0945 48</p>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>

```

```

</div>

<div class="row mt-5 justify-content-center">
  <div class="col-lg-10">
    <form      action="forms/contact.php"      method="post"      role="form"
class="php-email-form">
      <div class="row">
        <div class="col-md-6 form-group">
          <input type="text" name="name" class="form-control" id="name"
placeholder="Your Name" required>
        </div>
        <div class="col-md-6 form-group mt-3 mt-md-0">
          <input type="email" class="form-control" name="email" id="email"
placeholder="Your Email" required>
        </div>
      </div>
      <div class="form-group mt-3">
        <input type="text" class="form-control" name="subject" id="subject"
placeholder="Subject" required>
      </div>
      <div class="form-group mt-3">
        <textarea      class="form-control"      name="message"      rows="5"
placeholder="Message" 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 class="row  justify-content-center">

```

```

        <div class="col-lg-6">
            <h3>EVA</h3>
            <p>Subscribe! To get the recent updates in EV field</p>
        </div>
    </div>

    <div class="row footer-newsletter justify-content-center">
        <div class="col-lg-6">
            <form action="" method="post">
                <input type="email" name="email" placeholder="Enter your Email"><input
type="submit" value="Subscribe">
            </form>
        </div>
    </div>

    <div class="social-links">
        <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>
        <a href="#" class="linkedin"><i class="bx bxl-linkedin"></i></a>
    </div>

</div>
</div>

<div class="container footer-bottom clearfix">
    <div class="copyright">
        &copy; Copyright <strong><span>EVA</span></strong>. All Rights Reserved
    </div>
    <div class="credits">
        Designed by <a href="https://bootstrapmade.com/">VGteam</a>
    </div>
</div>
</footer><!-- End Footer -->

<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/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/php-email-form/validate.js"></script>

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

</body>

```


</html>

CSS

```
/*-----  
# General  
-----*/  
body {  
    font-family: "Open Sans", sans-serif;  
    color: #444444;  
}  
  
a {  
    color: #85b0be;  
    text-decoration: none;  
}  
  
a:hover {  
    color: #a6c6d0;  
    text-decoration: none;  
}  
  
h1,  
h2,  
h3,  
h4,  
h5,  
h6 {  
    font-family: "Raleway", sans-serif;  
}  
  
/*-----  
# Back to top button  
-----*/  
.back-to-top {  
    position: fixed;  
    visibility: hidden;  
    opacity: 0;  
    right: 15px;  
    bottom: 15px;  
    z-index: 996;  
    background: #85b0be;  
    width: 40px;  
    height: 40px;  
    border-radius: 4px;  
    transition: all 0.4s;  
}  
  
.back-to-top i {
```

```

    font-size: 28px;
    color: #fff;
    line-height: 0;
}

.back-to-top:hover {
    background: #a0c1cc;
    color: #fff;
}

.back-to-top.active {
    visibility: visible;
    opacity: 1;
}

/*-----
# Header
-----*/
#header {
    z-index: 997;
    transition: all 0.5s;
    background: #052c3f;
    padding: 22px 0;
}

#header.header-transparent {
    background: none;
}

#header.header-scrolled {
    background: rgba(5, 44, 63, 0.8);
    padding: 12px 0;
}

#header .logo h1 {
    font-size: 36px;
    margin: 0;
    padding: 0;
    line-height: 1;
    font-weight: 400;
    letter-spacing: 3px;
    text-transform: uppercase;
}

#header .logo h1 a,
#header .logo h1 a:hover {
    color: #faf093;
    text-decoration: none;
}

```

```

#header .logo img {
  padding: 0;
  margin: 0;
  max-height: 40px;
}

@media (max-width: 768px) {
  #header .logo h1 {
    font-size: 28px;
  }
}

/*-----
# Navigation Menu
-----*/
/**
 * Desktop Navigation
 */

.navbar {
  padding: 0;
}

.navbar ul {
  margin: 0;
  padding: 0;
  display: flex;
  list-style: none;
  align-items: center;
}

.navbar li {
  position: relative;
}

.navbar a,
.navbar a:focus {
  display: flex;
  align-items: center;
  justify-content: space-between;
  padding: 5px 15px 7px 15px;
  margin-left: 5px;
  font-size: 14px;
  color: #fff;
  white-space: nowrap;
  transition: 0.3s;
  border-radius: 50px;
}

.navbar a i,

```

```

.navbar a:focus i {
  font-size: 12px;
  line-height: 0;
  margin-left: 5px;
}

.navbar a:hover,
.navbar .active,
.navbar .active:focus,
.navbar li:hover>a {
  color: #ffffff;
  background: #85b0be;
}

/**
 * Mobile Navigation
 */
.mobile-nav-toggle {
  color: #fff;
  font-size: 28px;
  cursor: pointer;
  display: none;
  line-height: 0;
  transition: 0.5s;
}

@media (max-width: 991px) {
  .mobile-nav-toggle {
    display: block;
  }

  .navbar ul {
    display: none;
  }
}

.navbar-mobile {
  position: fixed;
  overflow: hidden;
  top: 0;
  right: 0;
  left: 0;
  bottom: 0;
  background: rgba(20, 21, 28, 0.9);
  transition: 0.3s;
  z-index: 999;
}

.navbar-mobile .mobile-nav-toggle {
  position: absolute;

```

```
    top: 15px;
    right: 15px;
}
```

```
.navbar-mobile ul {
    display: block;
    position: absolute;
    top: 55px;
    right: 15px;
    bottom: 15px;
    left: 15px;
    padding: 10px 0;
    border-radius: 10px;
    background-color: #fff;
    overflow-y: auto;
    transition: 0.3s;
}
```

```
.navbar-mobile a,
.navbar-mobile a:focus {
    padding: 10px 20px;
    margin: 5px;
    font-size: 15px;
    color: #2a2c39;
}
```

```
.navbar-mobile a:hover,
.navbar-mobile .active,
.navbar-mobile li:hover>a {
    color: #fff;
}
```

```
.navbar-mobile .getstarted,
.navbar-mobile .getstarted:focus {
    margin: 15px;
}
```

```
.navbar-mobile .dropdown ul {
    position: static;
    display: none;
    margin: 10px 20px;
    padding: 10px 0;
    z-index: 99;
    opacity: 1;
    visibility: visible;
    background: #fff;
    box-shadow: 0px 0px 30px rgba(127, 137, 161, 0.25);
}
```

```
.navbar-mobile .dropdown ul li {
```

```

    min-width: 200px;
}

.navbar-mobile .dropdown ul a {
    padding: 10px 20px;
}

.navbar-mobile .dropdown ul a i {
    font-size: 12px;
}

.navbar-mobile .dropdown ul a:hover,
.navbar-mobile .dropdown ul .active:hover,
.navbar-mobile .dropdown ul li:hover>a {
    color: #fff;
}

.navbar-mobile .dropdown>.dropdown-active {
    display: block;
}

/*-----
# Home Section
-----*/
#home {
    width: 100%;
    height: 100vh;
    background: url("../img/Porsche1.jpg") top center;
    background-size: cover;
    position: relative;
}

#home:before {
    content: "";
    background: rgba(5, 44, 63, 0.5);
    position: absolute;
    bottom: 0;
    top: 0;
    left: 0;
    right: 0;
}

#home .home-container {
    position: absolute;
    bottom: 0;
    top: 0;
    left: 0;
    right: 0;
    display: flex;
    justify-content: center;

```

```
    align-items: center;
    flex-direction: column;
    text-align: center;
    padding: 0 15px;
}
```

```
#home h1 {
    margin: 0 0 15px 0;
    font-size: 48px;
    font-weight: 700;
    line-height: 56px;
    text-transform: uppercase;
    color: #fff;
}
```

```
#home h2 {
    color: #eee;
    margin-bottom: 30px;
    font-size: 24px;
}
```

```
#home .btn-get-started {
    font-family: "Raleway", sans-serif;
    text-transform: uppercase;
    font-weight: 500;
    font-size: 16px;
    letter-spacing: 1px;
    display: inline-block;
    padding: 10px 28px;
    border-radius: 4px;
    transition: 0.5s;
    border: 2px solid #ffff66;
    color: #fff;
    position: relative;
    justify-content: center;
    align-items: flex-start;
    flex-direction: column;
    text-align: center;
    top: 40px;
}
```

```
#home .btn-get-started:hover {
    background: linear-gradient(to left, #f5e342 0%, #85b0be 100%);/*#85b0be;*/
    border: 2px solid #85b0be;
}
```

```
@media (min-width: 1024px) {
    #hero {
        background-attachment: fixed;
    }
}
```



```

}

@media (max-width: 768px) {
  #home h1 {
    font-size: 28px;
    line-height: 36px;
  }

  #home h2 {
    font-size: 18px;
    line-height: 24px;
    margin-bottom: 30px;
  }
}

/*-----
# Sections General
-----*/

section {
  padding: 60px 0;
  overflow: hidden;
}

.section-bg {
  background-color: #f6f9fa;
}

.section-title {
  text-align: center;
  padding-bottom: 30px;
}

.section-title h2 {
  font-size: 36px;
  font-weight: 700;
  text-transform: uppercase;
  margin-bottom: 20px;
  padding-bottom: 0;
  color: #052c3f;
}

.section-title p {
  margin-bottom: 0;
}

/*-----
# About
-----*/

#about{
background: url("../img/greenev.jpg");

```

```
background-repeat: no-repeat;
background-position-x: 790px;
```

```
}
.content{
  height: 70vh;
  margin-left:50px;
  margin-right:500px;
}
```

```
#about .content h2 {
  font-weight: 700;
  font-size: 48px;
  line-height: 60px;
  margin-bottom: 20px;
  text-transform: uppercase;
  color: #052c3f;
}
```

```
#about .content h3 {
  font-weight: 500;
  line-height: 32px;
  font-size: 24px;
  color: #4d8090;
  margin-right: 170px;
}
```

```
#about .content p:last-child {
  margin-bottom: 0;
}
```

```
/*-----
# Dashboard
-----*/
```

```
.align
{
  padding-left: 15px;
  padding-top: 0px;
  padding-bottom: 5px;
```

```
}
.align h2{
  font-weight: 700;
  text-align: center;
  color: #052c3f;
```

```
}
/*-----
# Overview
```

-----*/

```
#overview{
background: url("../img/fu-ev.jpg");
background-repeat: no-repeat;
background-size: 510px,500px;
background-position-y: 110px;
background-position-x: 25px;
padding-bottom: 0px;
}
```

```
#overview h2{
    font-weight: 700;
    text-align: center;
    color: #052c3f;
    padding-bottom: 50px;
}
```

```
.vcontent{
    margin-left:525px;
    margin-right:50px;
}
```

```
.vcontent h3{
    font-weight: 700;
    text-align: left;
    color: #006666;
}
```

```
.vcontent ul li{
    font-weight: 600;
    color: #cc9900;
    list-style-type: none;
}
```

/*-----

benefits

-----*/

```
#benefits{
    padding-top: 20px;
background: url("../img/renew.jpg");
background-repeat: no-repeat;
background-size: 500px,500px;
background-position-x: 800px;
}
```

```
.bcontent{
    margin-left:50px;
    margin-right:50px;
}
```

```
.bcontent h3{
```

```

    font-weight: 700;
    text-align: left;
    color: #006666;
}
.bcontent h4{
    font-family: 'Quicksand';
    font-weight: 700;
    color: #006666;
}
.bcontent ul li{
    font-weight: 600;
    color: #cc9900;
    list-style-type: none;
}
.bcontent h6{
    margin-left: 50px;
    margin-right: 500px;
    line-height: 29px;
}

```

```

/*-----
# Team
-----*/

.team .member {
    margin-bottom: 20px;
    overflow: hidden;
    text-align: center;
    border-radius: 5px;
    background: #fff;
    box-shadow: 0px 2px 15px rgba(0, 0, 0, 0.1);
}

.team .member .member-img {
    position: relative;
    overflow: hidden;
}

.team .member .social {
    position: absolute;
    left: 0;
    bottom: 0;
    right: 0;
    height: 40px;
    opacity: 0;
    transition: ease-in-out 0.3s;
    background: rgba(255, 255, 255, 0.85);
    display: flex;
    align-items: center;
}

```

```

    justify-content: center;
}

.team .member .social a {
    transition: color 0.3s;
    color: #052c3f;
    margin: 0 10px;
    display: inline-flex;
    align-items: center;
    justify-content: center;
}

.team .member .social a:hover {
    color: #85b0be;
}

.team .member .social i {
    font-size: 18px;
    line-height: 0;
}

.team .member .member-info {
    padding: 25px 15px;
}

.team .member .member-info h4 {
    font-weight: 700;
    margin-bottom: 5px;
    font-size: 18px;
    color: #052c3f;
}

.team .member .member-info span {
    display: block;
    font-size: 13px;
    font-weight: 400;
    color: #aaaaaa;
}

.team .member .member-info p {
    font-style: italic;
    font-size: 14px;
    line-height: 26px;
    color: #777777;
}

.team .member:hover .social {
    opacity: 1;
}

```

```

/*-----
# Contact
-----*/

.contact .info-wrap {
  box-shadow: 0px 2px 15px rgba(0, 0, 0, 0.1);
  padding: 30px;
  background: #fff;
}

.contact .info i {
  font-size: 20px;
  color: #85b0be;
  float: left;
  width: 44px;
  height: 44px;
  background: white;
  display: flex;
  justify-content: center;
  align-items: center;
  border-radius: 50px;
  transition: all 0.3s ease-in-out;
}

.contact .info h4 {
  padding: 0 0 0 60px;
  font-size: 22px;
  font-weight: 600;
  margin-bottom: 5px;
  color: #052c3f;
}

.contact .info p {
  padding: 0 0 0 60px;
  margin-bottom: 0;
  font-size: 14px;
  color: #0d6e9e;
}

.contact .info:hover i {
  background: #85b0be;
  color: #fff;
}

.contact .php-email-form {
  width: 100%;
  box-shadow: 0 0 24px 0 rgba(0, 0, 0, 0.12);
  padding: 30px;
  background: #fff;
}

```

```

}

.contact .php-email-form .form-group {
    padding-bottom: 8px;
}

.contact .php-email-form .validate {
    display: none;
    color: red;
    margin: 0 0 15px 0;
    font-weight: 400;
    font-size: 13px;
}

.contact .php-email-form .error-message {
    display: none;
    color: #fff;
    background: #ed3c0d;
    text-align: left;
    padding: 15px;
    font-weight: 600;
}

.contact .php-email-form .error-message br+br {
    margin-top: 25px;
}

.contact .php-email-form .sent-message {
    display: none;
    color: #fff;
    background: #18d26e;
    text-align: center;
    padding: 15px;
    font-weight: 600;
}

.contact .php-email-form .loading {
    display: none;
    background: #fff;
    text-align: center;
    padding: 15px;
}

.contact .php-email-form .loading:before {
    content: "";
    display: inline-block;
    border-radius: 50%;
    width: 24px;
    height: 24px;
    margin: 0 10px -6px 0;
}

```



```

border: 3px solid #18d26e;
border-top-color: #eee;
animation: animate-loading 1s linear infinite;
}

.contact .php-email-form input,
.contact .php-email-form textarea {
border-radius: 0;
box-shadow: none;
font-size: 14px;
}

.contact .php-email-form input:focus,
.contact .php-email-form textarea:focus {
border-color: #85b0be;
}

.contact .php-email-form input {
height: 44px;
}

.contact .php-email-form textarea {
padding: 10px 12px;
}

.contact .php-email-form button[type=submit] {
background: #85b0be;
border: 0;
padding: 10px 24px;
color: #fff;
transition: 0.4s;
border-radius: 4px;
}

.contact .php-email-form button[type=submit]:hover {
background: #6a9fb0;
}

@keyframes animate-loading {
0% {
transform: rotate(0deg);
}

100% {
transform: rotate(360deg);
}
}

/*-----
# Footer

```

```

-----*/
#footer {
  background: url("../img/footer-bg.jpg") top center no-repeat;
  color: #fff;
  font-size: 14px;
  position: relative;
}

#footer::before {
  content: "";
  position: absolute;
  left: 0;
  right: 0;
  top: 0;
  bottom: 0;
  background: rgba(1, 11, 16, 0.6);
  z-index: 1;
}

#footer .footer-top {
  position: relative;
  z-index: 2;
  text-align: center;
  padding: 80px 0;
}

#footer .footer-top h3 {
  font-size: 36px;
  font-weight: 700;
  color: #fff;
  position: relative;
  font-family: "Poppins", sans-serif;
  padding-bottom: 0;
  margin-bottom: 0;
}

#footer .footer-top p {
  font-size: 15;
  font-style: italic;
  margin: 30px 0 0 0;
  padding: 0;
}

#footer .footer-top .footer-newsletter {
  text-align: center;
  font-size: 15px;
  margin-top: 30px;
}

#footer .footer-top .footer-newsletter form {

```

```

background: #fff;
padding: 6px 10px 6px 8px;
position: relative;
border-radius: 4px;
box-shadow: 0px 2px 15px rgba(0, 0, 0, 0.1);
text-align: left;
}

#footer .footer-top .footer-newsletter form input[type=email] {
border: 0;
padding: 4px 8px;
width: calc(100% - 100px);
}

#footer .footer-top .footer-newsletter form input[type=submit] {
position: absolute;
top: 0;
right: -1px;
bottom: 0;
border: 0;
background: none;
font-size: 16px;
padding: 0 20px;
background: #85b0be;
color: #fff;
transition: 0.3s;
border-radius: 0 4px 4px 0;
box-shadow: 0px 2px 15px rgba(0, 0, 0, 0.1);
}

#footer .footer-top .footer-newsletter form input[type=submit]:hover {
background: #6a9fb0;
}

#footer .footer-top .social-links {
margin-top: 30px;
}

#footer .footer-top .social-links a {
font-size: 18px;
display: inline-block;
background: #85b0be;
color: #fff;
line-height: 1;
padding: 8px 0;
margin-right: 4px;
border-radius: 50%;
text-align: center;
width: 36px;
height: 36px;
}

```

```
    transition: 0.3s;
}

#footer .footer-top .social-links a:hover {
    background: #649aac;
    color: #fff;
    text-decoration: none;
}

#footer .footer-bottom {
    z-index: 2;
    position: relative;
    padding-bottom: 40px;
    text-align: center;
}

#footer .credits {
    text-align: center;
    font-size: 13px;
}
```