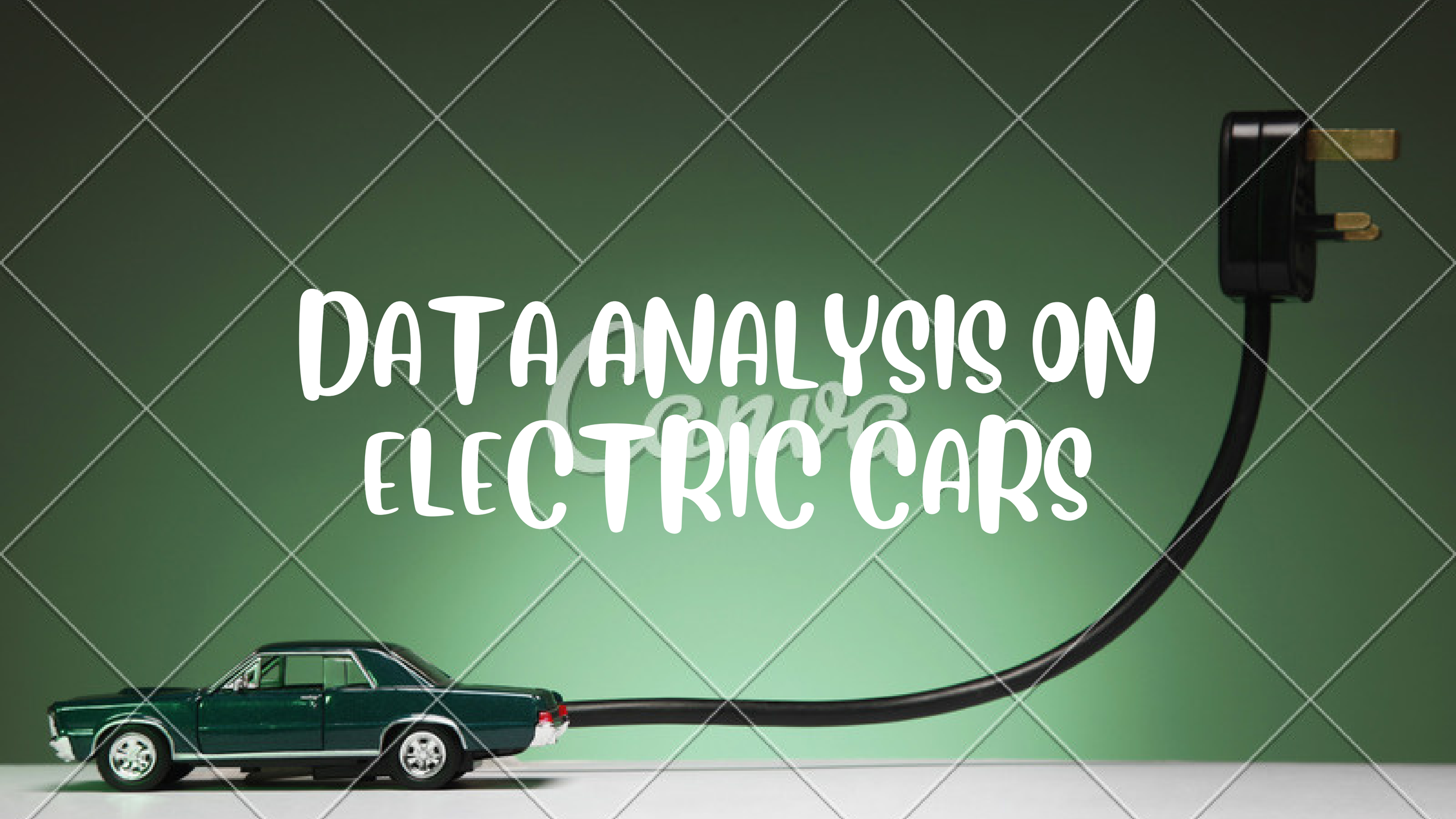
DATA ANALYSIS ON ELECTRIC CARS



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WHAT IS AN ELECTRIC VEHICLE??

An EV is a shortened acronym for an electric vehicle. EVs are vehicles that are either partially or fully powered on electric power.
Electric vehicles have low running costs as they have less moving parts for maintaining and also very environmentally friendly as they use little or no fossil fuels (petrol or diesel). While some EVs used lead acid or nickel metal hydride batteries, the standard for modern battery electric vehicles is now considered to be lithium ion batteries as they have a greater longevity and are excellent at retaining energy, with a self discharge rate of just 5% per month. Despite this improved efficiency, there are still challenges with these batteries as they can experience thermal runaway, which have, for example, caused fires or explosions in the Tesla model S, although efforts have been made to improve the safety of these batteries.

Recent Trends in Electric Cars

Electric vehicles in India have opened ample business opportunities for automobile companies within the country - as well as across the globe. India has great expectations of achieving a high level of penetration in E-mobility by 2030.

The reason is not very surprising; the alarming levels of pollution indices that keep on rising and the colossal dollars, the country must pay for annual crude oil imports. In December 2017, New Delhi was in a state of red alert. If India successfully manages to achieve this target by 2030, it can save about 1 Giga Tonne of emissions.

Start-ups that have been leading the adoption of electric mobility in India are now running out of road due to lack of financial support amidst this long ongoing lockdown.

Abstract

Electric vehicles, an uncommon means of transportation, are becoming more common in today's traffic jams and on roads. Such a fashionable wild is always in high demand. Additionally, there are many explanations for it, so it is not surprising. Many people started to consider whether to buy the typical car for us and further save and purchase an ecologically friendly product as a result of the economic crisis, the increase in the price of gasoline and oil. There will be more than 120 different electric car types available by 2020. These are excellent devices. Against their backdrop, the internal combustion engine will appear dated. All individuals interested in electric automobiles, entrepreneurs, and other interested parties will find the article informative and helpful.

Problem Statement

Nowadays, the trend is of electric vehicles, but like all other decisions , it has a lot of options in the market. so one has to go through a lot of factors while buying . So through this project we are solving that problem and give a good overview of all the factors responsible for buying a EV...

Overview

Platform Used -

R Studio

Libraries Used -

1. plotly and ggplot2 - Generating graphs
2. sqldf - Data Extraction
3. hmisc - For coefficient correlation

Methodology

1. Extract data from Kaggle
2. Cleaning and Loading
3. Exploratory Data Analysis
4. Result Presentation and Visualization

DATA REPRESENTATION AND VISUALIZATION

We found Solutions to The Following :

1. Which car has the fastest 0-100 acceleration?
2. Which has the highest efficiency?
3. Does a difference in power train effect the range, top speed, efficiency?
4. Which manufacturer has the most number of vehicles?
5. How does price relate to rapid charging??

Summary

The progress that the electric vehicle industry has seen in recent years is not only extremely welcomed, but highly necessary in light of the increasing global greenhouse gas levels. As demonstrated within the economic, social, and environmental analysis sections of this data, the benefits of electric vehicles far surpass the costs. The biggest obstacle to the widespread adoption of electric-powered transportation is cost related, it is our hope that through mass marketing and environmental education programs people will feel incentivized and empowered to drive an electric-powered vehicle. Each person can make a difference, so go electric and help make a difference!