

2015 Top 10 Electric Car In The U.S.

Team Four

Xuanyu Liu
Shujia Zhang
Yang Peng
Miao Li

May 22nd, 2015

Project Description

In this project, we made an online application that presents data analysis and visualization of the top 10 electric car in the U.S. of the year of 2015. The application provides specific comparison of price, performance as well as market share of 10 top brand electric cars. It also provides information about where to buy a specific model of a car. We implemented interactive dashboard and used bar graph, dot graph, bubble graph and map to provide a user-friendly experience, which makes people understand the data easily and quickly.

Users and Goals

The users of our application can be people who are interested in electric car or people who want to buy an electric car but hesitate about which car to choose. Users can also be environmentalist and governments who advocate green cars. In all, for people who wants to know more about the electric cars in respects of price, performance as well as market shares, our online application is a good reference.

Fulfill the Goals of Users

Our dataset includes all electric cars (10 model form 10 brands) in current American market. We provides data comparison in following aspects:

- Price
 - Base price
 - Dealer price
 - Lease price
 - Loan price
- Performance
 - Safety rating
 - Engine horse power
 - Battery capacity
 - Miles per charge
 - Brand reputation
- Market shares
 - Total sales from Jan. 2015 to Apr. 2015
- Dealer information

Data Source

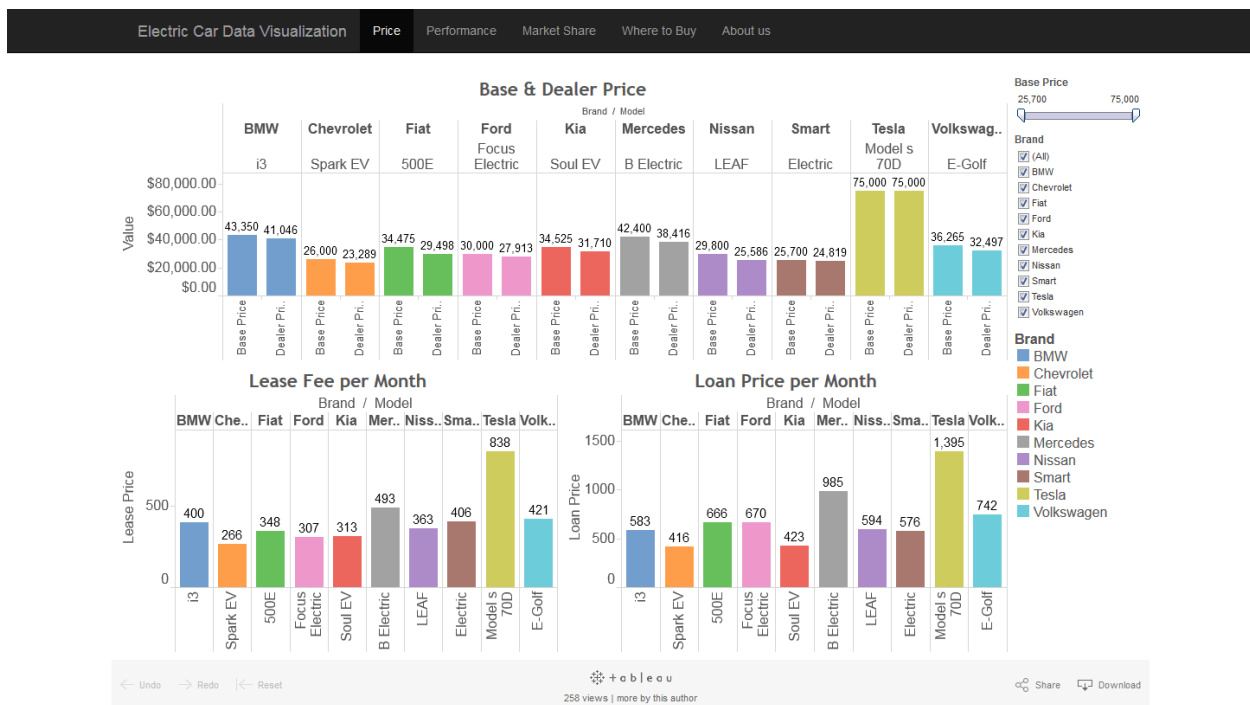
- www.cars.com
- www.truecar.com
- www.goodcarbadcar.com
- NHTSA-National Highway Traffic Safety Administration
- Official website of each car

Visualization

The performance, price and current market share of different brand's electric cars are main contents of our visualizations. Besides, we also show users where they can find the lowest price for different brands by one map. We use Dashboard Design to create the visualizations.

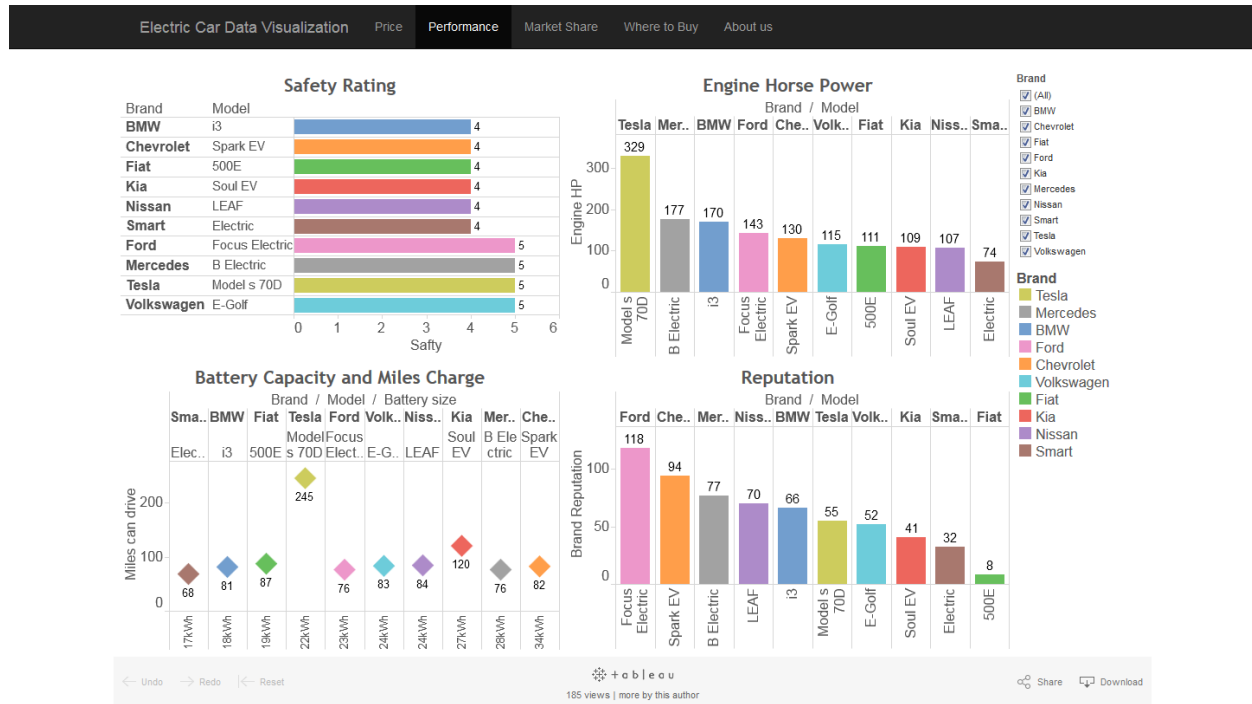
● Price Dashboard

In the price dashboard we use a bar chart to show the MSRP and the dealer price. So users can compare the two price directly. In the bottom there are loan price bar chart and lease price bar chart. We got the price from Truecar.com. The real price will change depends on the user's credit score and income. On the right corner, there are two filters which are price range slider and car brand checklist. If you have a budget plan, you can set price below your budget. Similarly, if you have a favorite brand, you can click the brand and get the highlights only on the brand you select.



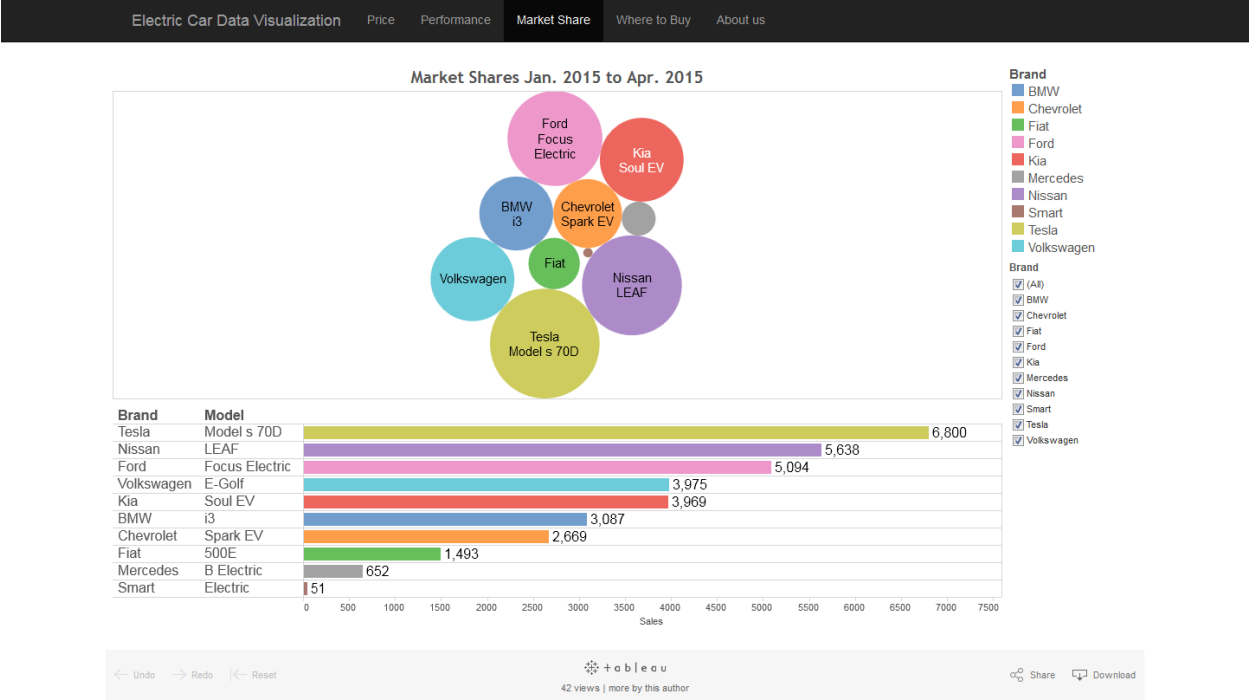
● Performance Dashboard

Usually people will be interested in the car performance. In the performance dashboard we have safety rating, engine horsepower, battery capacity and brand reputation. Since people really pay attention to safety. The engine horsepower will affect the accelerate time. Battery capacity represents how far this car can drive with a full charge.



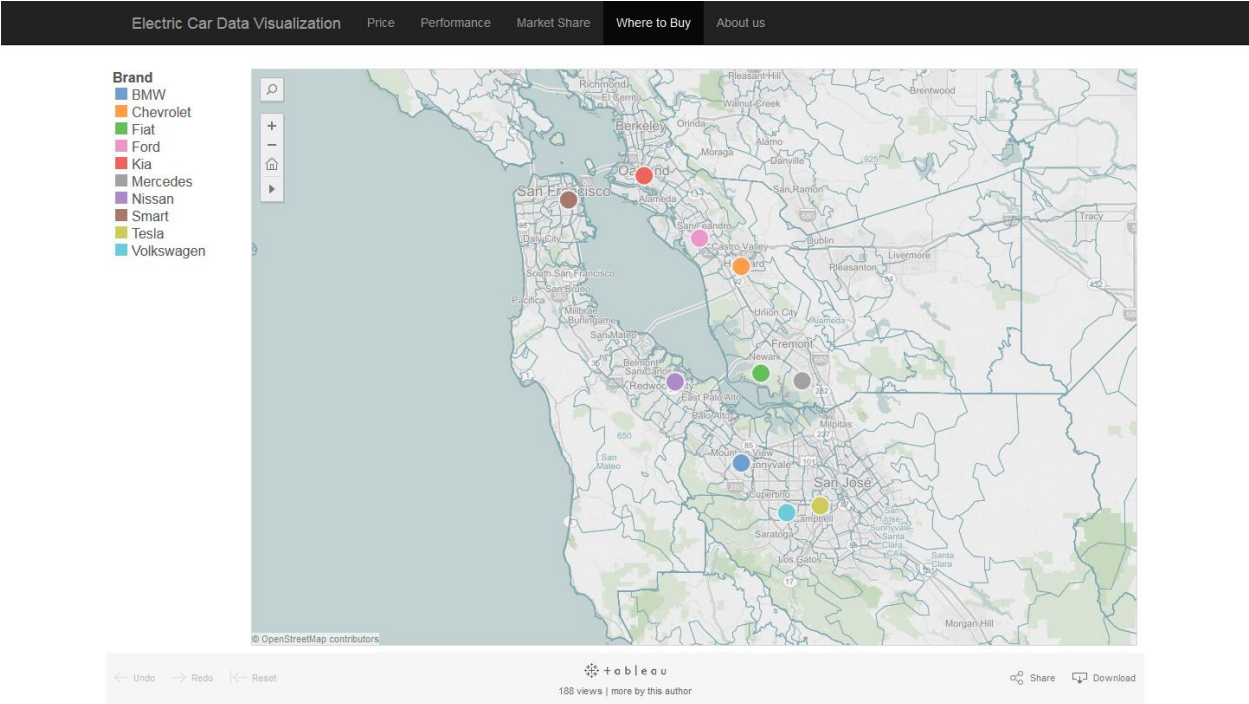
● Market Share Dashboard

For users, especially sellers, they can easily find the market share information from the following images. It is easy to know which brand has difference market share according to either the area of circles or the length of bars. And the bright color also clearly show the different brands.



● Where to Buy Dashboard

Map should be the most directly way to show the address. So we put the address of dealers on map and use different colors to outstand them. When you put your mouse on the points, the address and brand will appear. All the spots are the dealers which provide the lowest price of different brands.



Usage

We build our web pages by CSS, HTML and Jscript. Visualize the data by Tableau. Then embed the results on our web pages. So, you can run the application according to the following steps:

Step 1: Save the ecdv.zip file in one place and extract it.

Step 2: Open index.html with browsers.

Step 3: Now you can run it like any other normal website.