

Project 2 Proposal

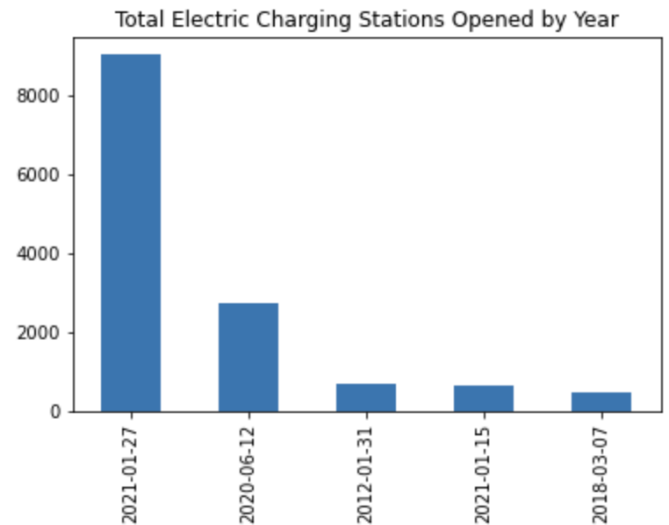
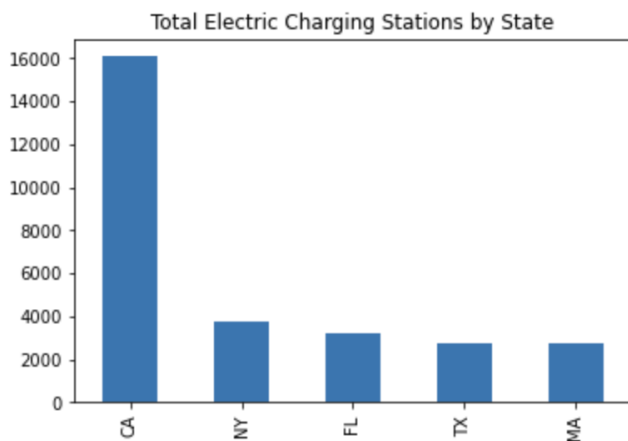
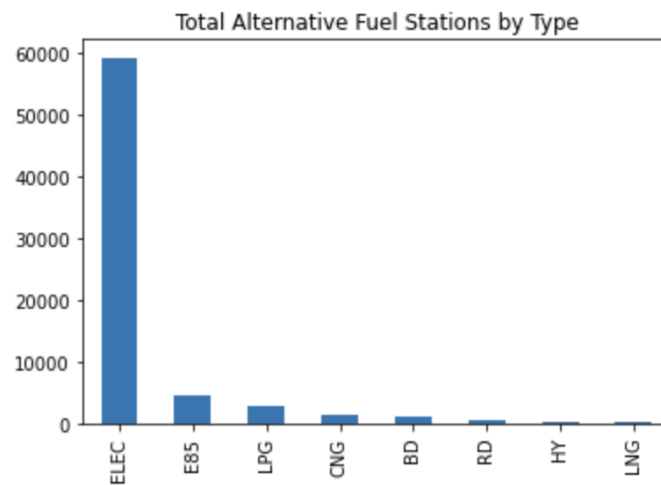
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Github Repository: [UC-Berkeley-I-School / Project2_Loyla_Luong_Dorfman](#)

Description of Dataset:

- [US Department of Energy - Alternative Fuels Data Center](#)
- Link: https://afdc.energy.gov/fuels/electricity_locations.html#/find/nearest?fuel=ELEC
- This dataset tracks the number, type, location, and more info about various alternative fueling stations in the USA. We propose to explore this dataset to identify patterns and trends in the establishment of electric vehicle charging infrastructure.

Initial Analysis of Dataset:



- Number of Rows: 70,096

- Number of Columns: 70

Variables of Interest:

- What columns do we intend to explore?
 - Intend to explore City, State, Fuel Type Code, Date Opened, Expected Date, Zip Code, EV Network.
- What kind of insights do we expect to learn?
 - We can gather insights of which cities and states are expanding their alternative fuels infrastructure and how fast this sector is growing from the past few years

Supplemental Dataset:

- <https://apps.bea.gov/regional/bearfacts/>
 - We can use the economic profile datasets for each **state** to find correlations of per capita personal income to the expansion of alternative fuel stations
- <https://www.bts.gov/content/gasoline-hybrid-and-electric-vehicle-sales>
 - We can use the total sales of hybrid/electric vehicles data to find correlations of the total sales by **year (join on column “open date” by year)** to the expansion of alternative fuel stations

Objectives of the Final Report:

- What you plan to cover in the final report and how you plan to organize it.
 - **Are the types of charging stations being deployed changing over time (e.g. level 1 vs level 2 vs DC fast).**
 - **Which states are the best at mitigating range anxiety? Are there regions that have high sales of electric vehicles but are underserved with low EV charging station density?**
 - **Are there any regional disparities in where charging stations are placed? (Such as Income Inequality)**
 - **Are companies other than Tesla rolling out charging stations in meaningful quantities?**
 - **How available and accessible (public vs private, hours of operations) are charging stations? Do certain states struggle with making charging stations accessible?**
 - Does personal income have a quantifiable impact on the number of available electric charging stations per state?
 - Does the total sales of hybrid/electric vehicles correlate with the number of openings of charging stations by year?