

Summary and Recommendation

In conclusion, this project successfully designed and implemented a relational database system tailored to the management and optimization of EV charging stations. By leveraging data from the U.S. government's Alternative Fueling Station Locations dataset, the database integrates essential information on station locations, energy consumption, station compatibility, and more. Through careful data cleaning and preprocessing, we ensured that the system could provide meaningful insights into EV infrastructure and support decision-making for future expansion.

As a recommendation, future developments should focus on enhancing the system with additional features such as real-time data integration and predictive analytics to better forecast energy consumption and demand. Implementing stronger data governance practices will also be crucial to maintaining data quality and security as the system scales. Additionally, expanding the database to include more comprehensive nationwide EV infrastructure data will support broader sustainability goals and help in optimizing the deployment of future charging stations across the country. By refining these elements, the database can play a pivotal role in advancing a more efficient and sustainable EV charging network.