**Analysis and Prediction of Electric Vehicle Ownership in Washington State**

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**ABSTRACT**

Over the last decade, electrical vehicles (EV) have rapidly gained popularity and demand in the United States as EV slowly become more efficient. This study explores the rising population of EVs on the roads to investigate trends and causes for this drastic shift in demand. Based on this analysis, a prediction of the future EV population will be made. The datasets utilized are limited to the availability of the data openly provided by the government. For this purpose, data exploration will be focused on the Washington state EV population datasets made publicly available by the Washington State Department of Licensing (DOL) [1][2].

This study will incorporate geographical and time series analysis of the EV population from 2017 to 2023. Based on the trend observed in the time series analysis, an appropriate regression model is trained to predict the amount of EVs that are likely to be registered in 2024, 2025, and 2026. The fitted forecast model will be evaluated for its accuracy using its mean absolute (percentage) error (MAE or MAPE) [3][4].

with the backing of federal incentives demanding improved battery efficiency [5], while encouraging citizens to switch to clean air vehicles.

**REFERENCES**

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