

# Comprehensive Analysis of Maryland Automotive Industry

This research project undertakes a comprehensive examination of the automotive industry's dynamics, leveraging a multifaceted approach combining SQL for data storage and Python for visualization, regression analysis, exploratory data analysis (EDA), and forecasting. Data obtained from the Maryland government encompasses socio and economic metrics, supplemented potentially by satellite imagery to understand car usage patterns. The study spans January to December, aiming to predict the automotive industry's trajectory over the next decade.

Initial findings highlight discernible impacts from major economic events such as the Global Financial Crisis (GFC) and the COVID-19 pandemic, reflecting an overarching decreasing trend in car sales. However, a closer investigation reveals intriguing shifts in car value despite declining sales figures. Additionally, the project delves into the dichotomy between new and used car markets, considering variables including GDP growth, inflation, and population dynamics.

The project's ultimate goal is to offer insights into future automotive industry trends by synthesizing a wealth of socio and economic data. By scrutinizing historical patterns and contemporary indicators, this study aims to provide valuable forecasts and strategic guidance for stakeholders in the automotive sector.

