

Automotive Industry Analysis: Executive Summary:

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The world and the automotive industry suffered a great disruption during the COVID Pandemic. As we return to a state of normalcy, the automotive industry still faces great uncertainty. We use historical sales data as well as sales data for the top fifteen highest selling cars in 2021 to understand the current market and to predict future sales for automobiles, light trucks, and heavy trucks. In particular, we are going to examine the following questions:

- What are the forecasted monthly vehicle sales across all manufacturers?
- What percentage of households have a vehicle?
- Does the cost of gas correlate to the number of cars being sold that month?
- Have the sales of cars gone up relative to the American population?
- How have certain car types trended in terms of sales over the last couple of decades?
- What is the mean commute time for cars vs other methods of commuting?
- What features correlate with the sales of cars?
- Does the Dow Jones United States Automobile Index exhibit similar trends to the other series we've examined?
- Are differences in state-level commuting characteristics, such as the most common commute method or average commute length, associated with differences in the type of best-selling car in each state?