TEAM 6  
Project Scope

12/12/20

## Project Background and Description

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|  | Our group will explore and analyze the critical factors such as Covid-19, unemployment, interest rates, and the stock market regarding car sales volume changes. We will also analyze automobile brands as it pertains to their standing in the stock market. |

## Potential Storylines

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|  | Potential investors hired the team as a financial analyst to wrangle data from sources (state sources) to determine if now is a safe time to invest in certain automobile brands and determine if that brand will surpass the pandemic.  OR  A financial newspaper has hired the team to develop data and visualizations to give their readers tools and tips for wise stock buying decisions. |

## Datasets

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|  | The following are our references that we will use to analyze our data.   * <https://www.truecar.com/prices-new> * <https://global.toyota/en/ir/library/sec/> * <https://www.fcagroup.com/enUS/investors/financial_regulatory/Pages/latest_financial_results.aspx> * <https://www.treasury.gov/resource-center/datachartcenter/interestrates/Pages/TextView.aspx?data=billRatesYear&year=2020> * <https://www.quandl.com/data/UMICH/SOC38-University-of-Michigan-Consumer-Survey-Reasons-for-Opinions-for-Buying-Conditions-for-Vehicles> * https://covidtracking.com/data/api * <https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm> * <https://markets.businessinsider.com/news/stocks/retail-investors-quarter-of-stock-market-coronavirus-volatility-trading-citadel-2020-7-1029382035#:~:text=Retail%20investors%20now%20account%20for,the%20market's%20trades%20in%202019>. * https://www.goodcarbadcar.net/ * https://www.volkswagenag.com/presence/investorrelation/publications/interimreports/2020/Q3\_2020\_e.pdf   Note: Our team may add additional sources depending on our findings before the completion of our project. |

## Potential Data Analysis Questions

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|  | The questions below will help our team identify different trends regarding critical factors that affect sales and brands.   * What factors explain changes in car sales? * How are certain factors, such as Covid-19, affecting automobile brands? * Are interest rates (bank discounts) affecting the volume of car sales? * Did all automobile segments change the same – luxury, mid-range, and economy vehicles? * Is there a correlation between car sales and stock price? * Do consumer sentiments play a part in car sales? If so, how much? |

## Potential Data Visualizations

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|  | The visualizations below will help our team display our findings.   * Line chart for Covid-19 cases * Scatter plot for Covid-19 cases per state * Line chart for the volume of car sales * Bar chart for the volume of car sales by brand * Bar chart for price segment car sales (average price per brand) * Pie chart displaying the top 5 vehicles (make and model) * Pie chart displaying the percentage of car sale changes regarding the top 3 vehicles * Line plot for displaying interest rates * Line plot for displaying the stock price |

# Project tasks

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| Responsibilities | Contributor |
| Create and manage GitHub repository | Dana Woodruff |
| Organize PowerPoint | Karen Pearson & Luis Fernando Ruiz |
| Add files to Google drive as needed | All team members |
| Analyzation of car data | Phillecia Qualls |
| Analyzation of Covid-19 data | Karen Pearson |
| Analyzation of stock data | Dana Woodruff |
| Analyzation of government data (unemployment, Interest rate, & consumer sentiment) | Luis Fernando Ruiz |

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