Dataset Overview:

The dataset is pulled from the FRED database, or the Federal Reserve Economic Data. This database contains a series of economic data on a daily, monthly, quarterly, and yearly basis. This database will be the primary contributor of information for the project. While this database is quite large, only a select few datasets are being used for the modeling [3].

FRED is a database maintained by the Federal Reserve Bank of st. Louis. Overall there are 816000 [1] different time series within this dataset. The data is compiled by the Federal Reserve, and gathered by other government agencies like the US census and the Bureau of labor statistics. FRED is known for playing a powerful role in financial markets.

We used ChatGPT to determine the most important and popular economic factors people tend to look at within the FRED database, and those 10 series along with inflation were used to create the models assisted with [2]. The data was taken from the start of 2010 to the end of 2022. This is the last day inflation data was available.

The 11 used series are defined below produced from ChatGPT:
- Real Gross Domestic Product (GDPC1): Real GDP is a measure of a country's economic output that takes into account the effects of inflation. It is a commonly used indicator of a country's economic health and is often used to compare economic performance across different time periods and countries [5].
- Consumer Price Index for All Urban Consumers: All Items (CPIAUCSL): It is a measure of the average change over time in the prices paid by urban consumers for a basket of goods and services. It is calculated by the Bureau of Labor Statistics (BLS) in the United States and is based on the prices of goods and services consumed by households in urban areas, including food, housing, transportation, medical care, and recreation.The CPI-U is used as a key economic indicator to measure inflation and the cost of living [5].
- Unemployment Rate (UNRATE): This series measures the percentage of the labor force that is unemployed. The unemployment rate is a key economic indicator used to measure the health of the labor market and the overall state of the economy.[4].
- Federal Funds Rate (FEDFUNDS): This series represents the interest rate at which depository institutions lend funds to each other overnight [4].
- Civilian Labor Force Participation Rate (CIVPART): This series measures the percentage of the civilian population that is either employed or actively seeking employment [4].
- Industrial Production Index (INDPRO): This series measures changes in the output of the industrial sector of the economy, including manufacturing, mining, and utilities [4].

- Total Vehicle Sales (TOTALSA): This series measures the number of vehicles sold by domestic and foreign manufacturers to customers in the United States [4].
- Real Disposable Personal Income (DSPIC96): This series measures the inflation-adjusted income that households have available to spend or save after paying taxes [4].
- Personal Consumption Expenditures: Goods and Services (PCE): This series tracks the value of all goods and services purchased by households in the United States [4].
- 10-Year Treasury Constant Maturity Rate (DGS10): This series represents the yield on 10-year Treasury bonds, which is a key benchmark for interest rates on a wide range of financial products [4].
- Adjusted Consumer Price Index for All Urban Consumers: All Items (CPALTT01USM657N): This series tracks changes in the prices of a basket of goods and services typically purchased by urban consumers, however it omits the more volatile categories from the measure such as food and energy [5].

References:
[1]Federal Reserve Bank of St. Louis. (n.d.). Series. FRED.
https://fred.stlouisfed.org/tags/series
[2]FRED (n.d.). Federal Reserve Economic Data. https://fred.stlouisfed.org/
[3] Federal Reserve Bank of St. Louis. (n.d.). What is FRED?. FRED Help.
https://fredhelp.stlouisfed.org/fred/about/about-fred/
[4] ChatGPT response, March 4th, 2023
[5] ChatGPT response March 11th, 2023