Datasets

1. GDP Growth Rate

* Description: Measures the rate at which a country’s economy is growing or contracting.
* It helps identify periods of economic growth (expansion) and recession (contraction), which can affect sector performance.

Source: Federal Reserve Economic Data (FRED – St. Louis FED)

Website: <https://fred.stlouisfed.org/series/GDP>

Filename: GDP.csv

1. Interest Rates

* Federal Funds Rate
* Changes in interest rates can influence borrowing costs, investment, and consumer spending, which in turn affect sector performance.

Source: Federal Reserve Economic Data (FRED – St. Louis FED)

Website: <https://fred.stlouisfed.org/series/FEDFUNDS>

Filename: FEDFUNDS.csv

1. Inflation Rate (CPI – Consumer Price Index for the United States)

* Measures the rate of change in the general price level of goods and services in an economy over time.
* High inflation can erode purchasing power and affect sectors differently.

Source: Federal Reserve Economic Data (FRED – St. Louis FED)

Website: <https://fred.stlouisfed.org/series/FPCPITOTLZGUSA>

Filename: FPCPITOTLZGUSA.csv

1. Unemployment Rate

* The percentage of labor force that is unemployed and actively seeking employment.
* High unemployment can reduce consumer spending and affect demand in sectors like technology and healthcare.

Source: Federal Reserve Economic Data (FRED – St. Louis FED)

Website: <https://fred.stlouisfed.org/series/UNRATE>

Filename: UNRATE.csv

1. Consumer Confidence Index

* Measures consumer sentiment regarding the overall economic outlook
* High consumer confidence correlates with increased spending in sectors like technology and energy.

Source: Federal Reserve Economic Data (FRED – St. Louis FED)

Website: <https://fred.stlouisfed.org/series/CSCICP03USM665S>

Filename: CSCICP03USM665S.csv

1. Retail Sales

* Measures the total receipts of retail stores, reflecting consumer spending.
* Consumer spending is a major driver of economic activity, particularly in the technology and healthcare sector.

Source: Federal Reserve Economic Data (FRED – St. Louis FED)

Website: https://fred.stlouisfed.org/series/RSXFS

Filename: RSXFS.csv

1. Industrial Production Index

* Measures the output of the industrial sector, which includes manufacturing, mining, and utilities.
* Relevant for the energy sector, as it reflects overall industry activity and energy demand.

Source: Federal Reserve Economic Data (FRED – St. Louis FED)

Website: https://fred.stlouisfed.org/series/INDPRO

Filename: INDPRO.csv

1. Crude Oil Prices

* The price per barrel of crude oil.
* Directly affects the energy sector (XLE) and can have indirect effects on other sectors due to its impact on production and transportations costs.

Source: Federal Reserve Economic Data (FRED – St. Louis FED)

Website: https://fred.stlouisfed.org/series/POILBREUSDM

Filename: POILBREUSDM.csv

1. 10-Year Treasury Yield

* The yield on the U.S government’s 10-year bond, which is a benchmark for interest rates.
* Influences the cost of capital and can affect investment in sectors like technology and healthcare.

Source: Federal Reserve Economic Data (FRED – St. Louis FED)

Website: https://fred.stlouisfed.org/series/dgs10

Filename: DGS10.csv

Application in Models:

**Time Series Analysis:** Use the GDP growth rate, interest rates, inflation rate, and crude oil prices to forecast sector performance.

**Regression Models:** GDP growth, interest rates, consumer confidence and unemployment as predictors for sector performance.

**Classification Models:** Classify periods as expansion or recession based on GDP growth and other indicators, and assess sector performance during these periods.