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**Project Proposal**

**Goals:**

* Identify economic patterns between recent (about 4-5 years ago to present) interest rates and consumer price indexes of American consumers.
* Analyze trends between adjacent variables, such as GDP, consumption, inflation rates, oil/gas prices, grocery prices, etc.
* Intertwine these findings with COVID-19 related datasets, such as cases, deaths, etc. and see how such a contemporary pandemic influences recent prices and consumer behaviors in key marketplaces.

**Strategies/Outlines:**

* Collect, organize, and clean the datasets by doing the following:
  + Align dates and columns correctly
  + Potentially create new data frames by extracting key columns from separate and existing datasets
  + Identify outliers by employing techniques learned in class (z-score or IQR)

**Questions to Answer:**

* How do interest rates affect the CPI of American consumers?
* How does Covid-related data affect current prices/data?
* Is there a specific subset of data (such as oil/gas or grocery items) that can be found to have a correlation from the original datasets?

**Datasets:**

[Federal Funds Effective Rate](https://fred.stlouisfed.org/series/DFF)

[Consumer Price Index for All Urban Consumers: All Items in U.S. City Average](https://fred.stlouisfed.org/series/CPIAUCSL)

[Consumer Price Index for All Urban Consumers: Fruits and Vegetables in U.S. City Average](https://fred.stlouisfed.org/series/CUSR0000SAF113)

[Meat Price Spreads](https://www.ers.usda.gov/data-products/meat-price-spreads/)

[Average Price: Ground Beef, 100% Beef (Cost per Pound/453.6 Grams) in U.S. City Average](https://fred.stlouisfed.org/series/APU0000703112)

[US Regular All Formulations Gas Price](https://fred.stlouisfed.org/series/GASREGW)

[unemployment rate](https://fred.stlouisfed.org/series/UNRATE)

[Consumer Price Index for All Urban Consumers: Personal Care Products in U.S. City Average](https://fred.stlouisfed.org/series/CUUR0000SEGB)

[Consumer Price Index for All Urban Consumers: Meats, Poultry, Fish, and Eggs in U.S. City Average](https://fred.stlouisfed.org/series/CUSR0000SAF112)

[Consumer Price Index for All Urban Consumers: All Items Less Food and Energy in U.S. City Average](https://fred.stlouisfed.org/series/CPILFESL)

[Covid cases and death](https://data.cdc.gov/Case-Surveillance/United-States-COVID-19-Cases-and-Deaths-by-State-o/9mfq-cb36/data)

[**https://www.kaggle.com/nhanhtrng/car-sales-automotive-industry**](https://www.kaggle.com/nhanhtrng/car-sales-automotive-industry)