# data-mining-final

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* Introduction and Conclusion (5 pts)
* a non-obvious insights –> further investigations (similar to the observation step in the scientific method)
* A metric or algorithm that quickly filters or sorts large amounts of data for people
* an audience and articulate the potential value
* at least 2 datasets or a single large dataset for your project.articulate how the datasets complement each other
* You must use an algorithm to explore the relationship between different features in the data similar to Project 1.
* Please verify the results from your mining whether is due to chance or likely a real pattern.

## Datasets

The data sets are difficult to keep track of by themselves. They have to each be downloaded separately. As a result, each is listed here for reference:

consumer\_price\_index\_urban: Consumer Price Index for All Urban Consumers: All Items in U.S. City Average (CPIAUCSL)

<https://fred.stlouisfed.org/series/CPIAUCSL>

inflation\_expectation: University of Michigan: Inflation Expectation (MICH)

ten\_year\_treasury: 10-Year Treasury Constant Maturity Rate (DGS10)

<https://fred.stlouisfed.org/series/DGS10>

ten\_minus\_two\_treasury: 10-Year Treasury Constant Maturity Minus 2-Year Treasury Constant Maturity (T10Y2Y)

<https://fred.stlouisfed.org/series/T10Y2Y>

ten\_minus\_three\_months\_treasury: 10-Year Treasury Constant Maturity Minus 3-Month Treasury Constant Maturity (T10Y3M)

<https://fred.stlouisfed.org/series/T10Y3M>

unemployment\_rate: Unemployment Rate (UNRATE)

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

real\_gdp: Real Gross Domestic Product (GDPC1)  
<https://fred.stlouisfed.org/series/GDPC1>

eff\_fed\_funds\_rate: Effective Federal Funds Rate (FEDFUNDS)

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

gdp: Gross Domestic Product (GDP)

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

thirty\_year\_fixed\_mortgage: 30-Year Fixed Rate Mortgage Average in the United States (MORTGAGE30US)

<https://fred.stlouisfed.org/series/MORTGAGE30US>

velocity\_of\_mtwo: Velocity of M2 Money Stock (M2V)

<https://fred.stlouisfed.org/series/M2V>

s\_and\_p: S&P/Case-Shiller U.S. National Home Price Index (CSUSHPINSA)

<https://fred.stlouisfed.org/series/CSUSHPINSA>

m\_one: M1 Money Stock (M1SL)

<https://fred.stlouisfed.org/series/M1SL>

m\_two: M2 Money Stock (M2SL)

<https://fred.stlouisfed.org/series/M2SL>

federal\_debt\_percent\_of\_gdp: Federal Debt: Total Public Debt as Percent of Gross Domestic Product (GFDEGDQ188S)

<https://fred.stlouisfed.org/series/GFDEGDQ188S>

all\_employees\_minus\_farmers: All Employees, Total Nonfarm (PAYEMS)

<https://fred.stlouisfed.org/series/PAYEMS>

personal\_savings\_rate: Personal Saving Rate (PSAVERT)

<https://fred.stlouisfed.org/series/PSAVERT>

aaa\_corporate\_bond\_yield: Moody’s Seasoned Aaa Corporate Bond Yield (AAA)

<https://fred.stlouisfed.org/series/AAA>

personal\_consumption\_expenditures: Personal Consumption Expenditures (PCE)

<https://fred.stlouisfed.org/series/PCE>

industrial\_production\_index: Industrial Production: Total Index (INDPRO)

<https://fred.stlouisfed.org/series/INDPRO>

federal\_debt\_total: Federal Debt: Total Public Debt (GFDEBTN)

<https://fred.stlouisfed.org/series/GFDEBTN>

labor\_force\_participation\_rate: Labor Force Participation Rate (CIVPART)

<https://fred.stlouisfed.org/series/CIVPART>

consumer\_price\_index\_nationwide: Consumer Price Index: Total All Items for the United States (CPALTT01USM657N)

<https://fred.stlouisfed.org/series/CPALTT01USM657N>

gold\_price: Gold Fixing Price 10:30 A.M. (London time) in London Bullion Market, based in U.S. Dollars (GOLDAMGBD228NLBM)

<https://fred.stlouisfed.org/series/GOLDAMGBD228NLBM>

m\_three: M3 for the United States (MABMM301USM189S)

<https://fred.stlouisfed.org/series/MABMM301USM189S>

real\_gdp\_per\_capita: Real gross domestic product per capita (A939RX0Q048SBEA)

<https://fred.stlouisfed.org/series/A939RX0Q048SBEA>

federal\_surplus\_or\_deficit: Federal Surplus or Deficit [-] (FYFSD)

<https://fred.stlouisfed.org/series/FYFSD>

house\_price\_index\_nationwide: All-Transactions House Price Index for the United States (USSTHPI)

<https://fred.stlouisfed.org/series/USSTHPI>

total\_vehicle\_sales: Total Vehicle Sales (TOTALSA)