The **historical_prices.csv** dataset contains daily financial time-series data covering stocks, bonds, cryptocurrencies, commodities, and risk factors from January 3, 2017, to October 30, 2025.

1. Cryptocurrencies (Yahoo Finance)

Column Name	Data Type	Missing Values	Description
BNB-USD	float64	216	**Binance Coin (USD)**. Daily price. *(Note: Missing values before its Nov 9, 2017, launch)*.
BTC-USD	float64	0	**Bitcoin (USD)**. Daily price.
DOGE-USD	float64	216	**Dogecoin (USD)**. Daily price. *(Note: Missing values before Sep 17, 2014, due to later trading start)*.
ETH-USD	float64	216	**Ethereum (USD)**. Daily price. *(Note: Missing values before Nov 9, 2017, due to later trading start)*.
SHIB-USD	float64	933	**Shiba Inu (USD)**. Daily price. *(Note: High number of missing values; launched Aug 1, 2020)*.
SOL-USD	float64	823	**Solana (USD)**. Daily price. *(Note: High number of missing values; launched Apr 10, 2020)*.
XRP-USD	float64	216	**XRP (USD)**. Daily price. *(Note: Missing values before Sep 17, 2014, due to later trading start)*.

2. Traditional Indices & Rates (Yahoo Finance)
   Standard financial benchmarks.

Column Name	Data Type	Missing Values	Description
^IRX	float64	0	**13-Week Treasury Bill Index**. Represents the short-term "risk-free" interest rate.
^RUT	float64	0	**Russell 2000 Index**. Small-cap stock market index.
^SPX	float64	0	**S&P 500 Index**. Market-cap-weighted index of 500 leading US companies.
^VIX	float64	0	**CBOE Volatility Index**. Measures market expectations of near-term volatility (the "fear gauge").

3. Exchange Traded Funds (ETFs) (Yahoo Finance)
Used as proxies for various asset classes.

Column Name	Data Type	Missing Values	Description
AGG	float64	0	**iShares Core U.S. Aggregate Bond ETF**. Proxy for the total U.S. investment-grade bonds (broad market).
DBC	float64	0	**Invesco DB Commodity Index Tracking Fund**. Proxy for broad commodity prices (oil, metals, agriculture).
GLD	float64	0	**SPDR Gold Shares**. Proxy for the spot price of Gold bullion (commodity).
IEF	float64	0	**iShares 7-10 Year Treasury Bond ETF**. Proxy for medium-term U.S. government bonds.
TLT	float64	0	**iShares 20+ Year Treasury Bond ETF**. Proxy for long-term U.S. government bonds.
URTH	float64	0	**iShares MSCI World ETF**. Proxy for the MSCI World Index (Global Developed Markets).
VNQ	float64	0	**Vanguard Real Estate ETF**. Proxy for U.S. Real Estate Investment Trusts (REITs).

4. Specialized Indices (CBOE & Bloomberg)

Column Name	Data Type	Missing Values	Description
PUT	float64	0	**CBOE S&P 500 PutWrite Index**. Tracks the performance of a hypothetical strategy that sells at-the-money put options on the S&P 500. It measures the premium collected from selling volatility.
CDX.NA.IG	float64	0	**Markit CDX North America Investment Grade Index:** A benchmark index that tracks a basket of 125 North American investment-grade credit default swaps. Interpretation: Rising values indicate increasing cost to insure debt (higher credit risk); falling values indicate improving credit conditions.

5. Fama-French 3 Factors (Ken French Library)
   Used for asset pricing models to explain returns

Column Name	Data Type	Missing Values	Description
Mkt-RF	float64	0	**Market Excess Return**. The return of the market portfolio minus the risk-free rate (market risk premium).
SMB	float64	0	**Small Minus Big (Size Factor)**. The historical excess returns of small-cap stocks minus big-cap stocks.
HML	float64	0	**High Minus Low (Value Factor)**. The historical excess returns of value stocks (high book-to-market) minus growth stocks (low book-to-market).
RF	float64	0	**Risk-Free Rate**. The return on the one-month U.S. Treasury bill.

Notes:

1. Missing Data (Cryptocurrencies): Tickers like SOL-USD, SHIB-USD, and BNB-USD contain significant NaN values (missing data) in the earlier rows. This is normal because these assets did not exist or were not actively traded in 2017.
2. Date Range: The dataset covers 2,220 trading days.
3. Fama-French Factors: The columns Mkt-RF, SMB, and HML are usually expressed as percentages (e.g., 0.83 means 0.83%).