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TECHNICAL ANALYSIS OF CRYPTOCURRENCIES

PROGRESS SUMMARY

▸ Completed approximately 30 analysis methods

  ▸ Completed Volume, Volatility, and Momentum entirely. Have a few left for the final category, Trend

▸ Started working a bit less on the coding side and a bit more on the analysis/ conclusion side - began taking notes on which methods are optimal, and which can be potentially combined

  ▸ By extension, started semi-filtering out methods which aren't all that useful

TA BROAD CATEGORIES

Volume

- Money Flow Index (MFI)
- Accumulation/Distribution Index (ADI)
- On-Balance Volume (OBV)
- Chaikin Money Flow (CMF)
- Force Index (FI)
- Ease of Movement (EoM, EMV)
- Volume-price Trend (VPT)
- Negative Volume Index (NVI)
- Volume Weighted Average Price (VWAP)

Volatility

- Average True Range (ATR)
- Bollinger Bands (BB)
- Keltner Channel (KC)
- Donchian Channel (DC)
- Ulcer Index (UI)

Trend

- Simple Moving Average (SMA)
- Exponential Moving Average (EMA)
- Weighted Moving Average (WMA)
- Moving Average Convergence Divergence (MACD)
- Average Directional Movement Index (ADX)
- Vortex Indicator (VI)
- Trix (TRIX)
- Mass Index (MI)
- Commodity Channel Index (CCI)
- Detrended Price Oscillator (DPO)
- KST Oscillator (KST)
- Ichimoku Kinkō Hyō (Ichimoku)
- Parabolic Stop And Reverse (Parabolic SAR)
- Schaff Trend Cycle (STC)

Momentum

- Relative Strength Index (RSI)
- Stochastic RSI (SRSI)
- True strength index (TSI)
- Ultimate Oscillator (UO)
- Stochastic Oscillator (SR)
- Williams %R (WR)
- Awesome Oscillator (AO)
- Kaufman's Adaptive Moving Average (KAMA)
- Rate of Change (ROC)
- Percentage Price Oscillator (PPO)
- Percentage Volume Oscillator (PVO)

SAMPLE ANALYSIS

▶ Liked to include methods like these that can arguably be standalone and not contingent on combining with others


```python
# Vortex Indicator (VI) – trend
def vortex(df):
    # A vortex indicator (VI) is an indicator composed of two lines – an uptrend line (VI+) and a downtrend line (VI-). These lines are typically colored green and red respectively.
    # A vortex indicator is used to spot trend reversals and confirm current trends.
    # question
    # The vortex indicator is commonly used in conjunction with other reversal trend patterns to help support a reversal signal.
    # An uptrend or buy signal occurs when VI+ is below VI- and then crosses above VI- to take the top position among the trendlines. A downtrend or sell signal occurs when VI- is
    # below VI+ and crosses above VI+ to take the top position among the trendlines.
    plt.plot(df.Close, label='Close')
    plt.title(df.name)
    plt.legend()
    plt.show()
    plt.plot(df.trend_vortex_ind_pos, label='VI POS', color='green')
    plt.plot(df.trend_vortex_ind_neg, label='VI NEG', color='red')
    plt.plot(df.trend_vortex_ind_diff, label='VI DIFF', color='black')
    plt.title("Vortex Indicator " + df.name)
    plt.legend()
    plt.show()
```

FUTURE PLANS

▸ Would like to finish all the basic analysis by this weekend 100%

▸ Then, moving on to getting rid of the analysis methods that I just won't be analyzing further/ that aren't super helpful in the scope of this project

▸ Once I have my final set, I'll begin trying to combine some of them and see what conclusions I can arrive at

▸ I realize that a 12 month period might be too large for some indicators, which is why some of them drop off to a horizontal line in the middle. In this case, I might have to amend my dataset to a 6 month period for example for certain indications in order to most accurately measure their effectiveness. Most likely picking a 6 month period with equally dispersed spikes and dips to account for some sense of uniformity