Clustering and Predictive Crypto ML Model

Team 1 Members

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Description

Run a clustering analysis on 50-100 tokens with the following features:

- Market cap
- Volume
- Supply
- Transactions
- Address count
- Velocity
- Major Headline (Y/N or scale 1-10)
- Will explore others

View the results, tease out interesting insights, and create a diversified portfolio of crypto tokens.

For each cluster create a price index that is equal-weighted for the constituents in the group.

Create an overlay plot with each index, and look for patterns.

Research Questions

- Is there a group of tokens that are lagging or leading the overall crypto market?
- Can clustering analysis inform the creation of a diversified crypto portfolio?
- What is the most interesting pattern?
- Can fundamental metrics explain price movements?
- Do groupings change with new features?

Key Highlights on Token Clustering

- BTC and ETH prices are less correlated than expected.
- Smart contract platforms were well correlated across all 3 clustering models (ETH, ADA, POLY, ALGO)
- Only one model clustered BTC and ETH closer together, the other two clustered them in separate buckets.
- DEX tokens were also mostly grouped together
- Future work: Crypto group in a clustering model with equities

Expected Datasets

CoinMetrics API
Yahoo Finance API
News or Sentiment Analysis API?
Others as needed

Tasks Breakdown

Tim: Additional features to add
Dariush: Clustering analysis
Aquiba: Building dataframe
David: Presentation prep