Institutional Analytics for Retail Investors
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Abstract

Bridge the gap between institutional and individual investors by equipping individuals with analytical tools based on fundamental analysis, sentiment analysis, and technical analysis.

Features

- Data collected from various APIs
- Persisted in database
- Analyze tweet sentiment, fundamental strength, technical movements
- Combine into overall recommendation
- Mobile-friendly interface
- Custom indicators based on user preferences
- Intuitive explanation of analysis

User Interface

- Sentiment Analysis Page
- Trading Signals Page

System Diagram

Data Aggregator
- Extract tweets with associated stock ticker
- Use Yahoo Finance API to retrieve financial data
- Program values and compares to market
- Analysis of patterns and movements of short-term price

Score Compilation
- Stanford NLP API scores tweets

Signal Generator
- Sentiment Analysis
- Technical Analysis

User Portal
- Sentence Sentiment Score

Fundamental Analysis

- Balance sheet indicating low debt-to-equity ratio
- Income statement indicating low P/E

Sentiment Analysis

- Sentiment Parse Tree
- Head and shoulders pattern indicating price reversal

Technical Analysis

- Triangle top formation signaling price increase upon breakout

Head and shoulders pattern indicating price reversal
Balance sheet indicating low debt-to-equity ratio
Income statement indicating low P/E
Combination of analyses leads to positive fundamental score
Sentence Sentiment Score

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