

A decorative border composed of a grid of squares in various shades of green, yellow, and blue, framing the central text area.

Project Robo-trade

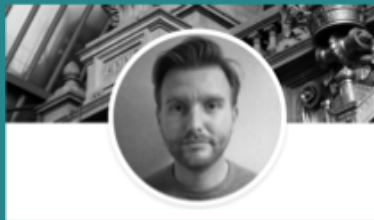
Automatic trading of cryptocurrency based on sentiment

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The Team



Joe DiFrancesco



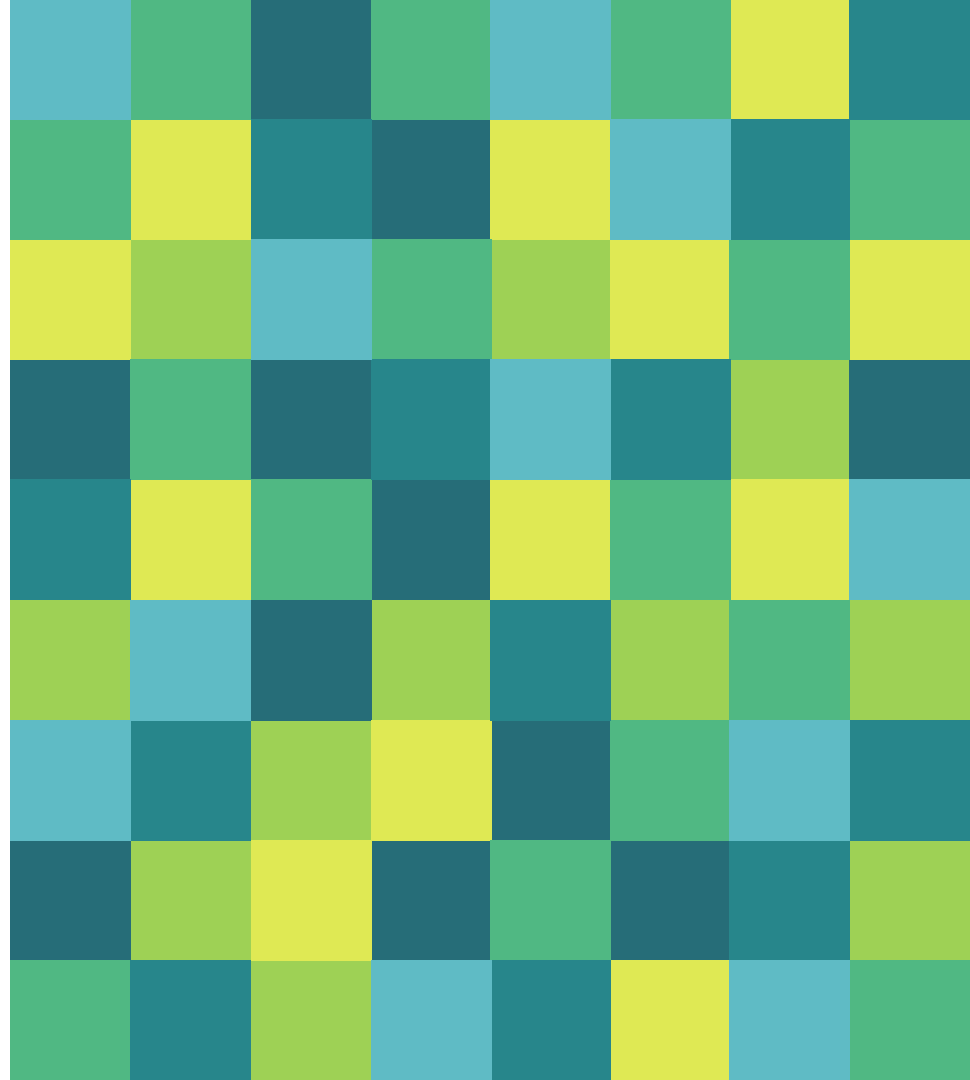
Arjen van den
Heuvel



Barthélémy Ghez

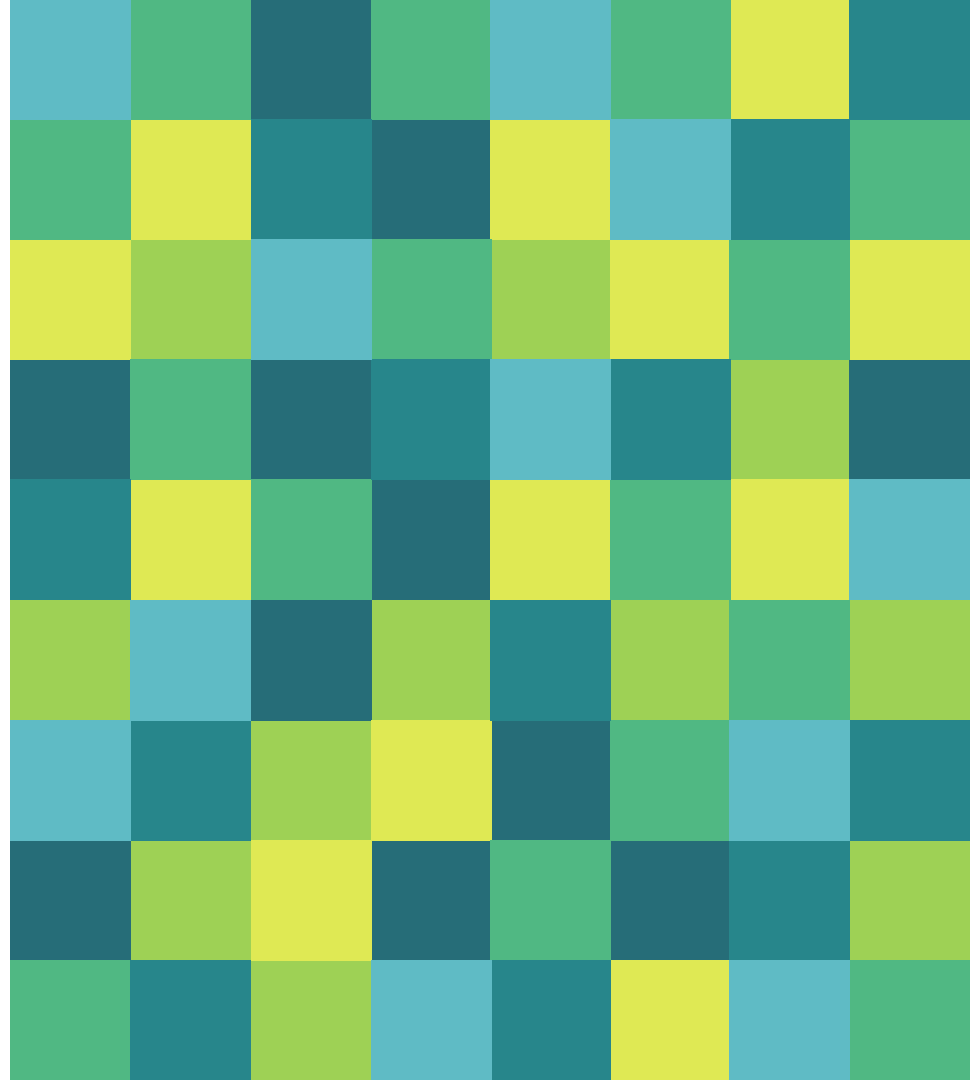
Business Question

Can we automate cryptocurrency-trading based on the assumption that news- and discussion websites drives the exchange prices?



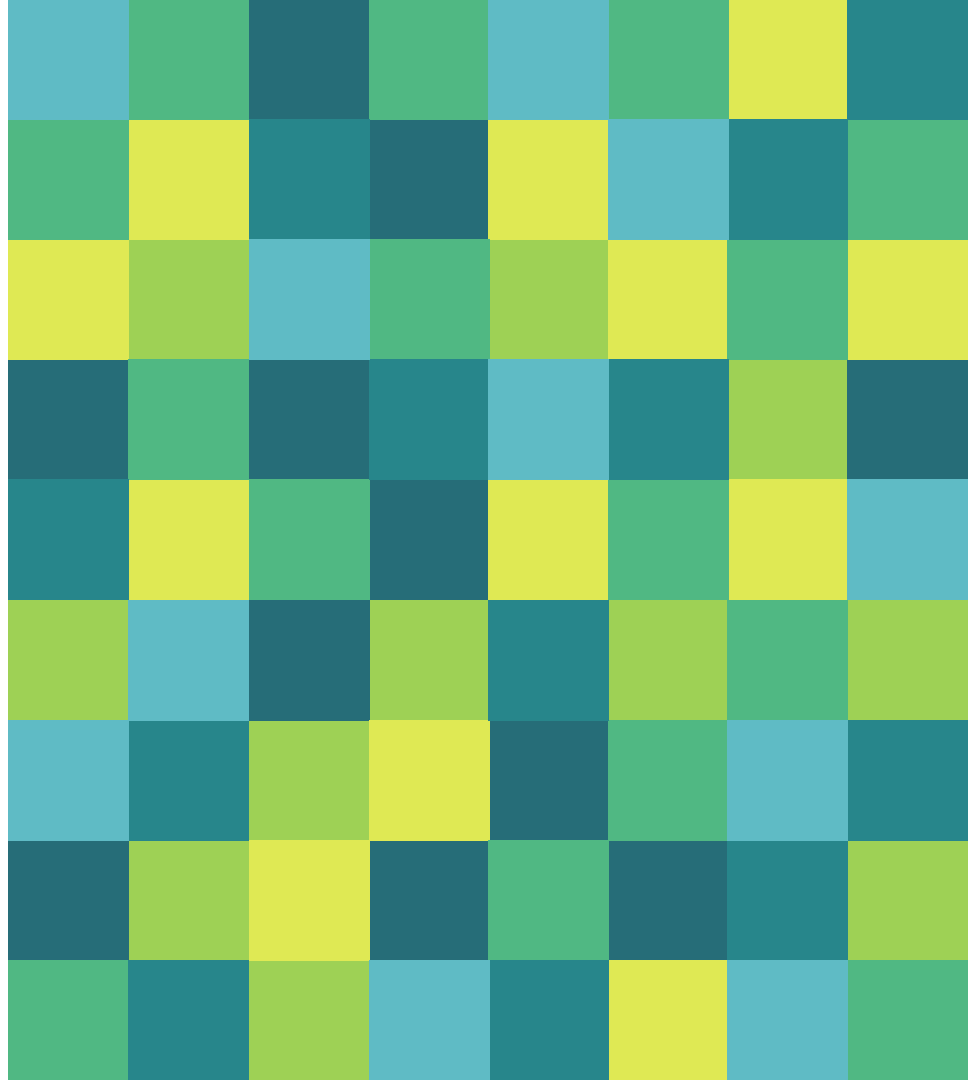
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1.

Project Design



Project Design (1/2)

Webscraper

Using a web scraper, data is periodically collected from around 20 specifically targeted websites. These are monitored for keywords concerning Bitcoin, Ethereum and Litecoin.

Cleaning

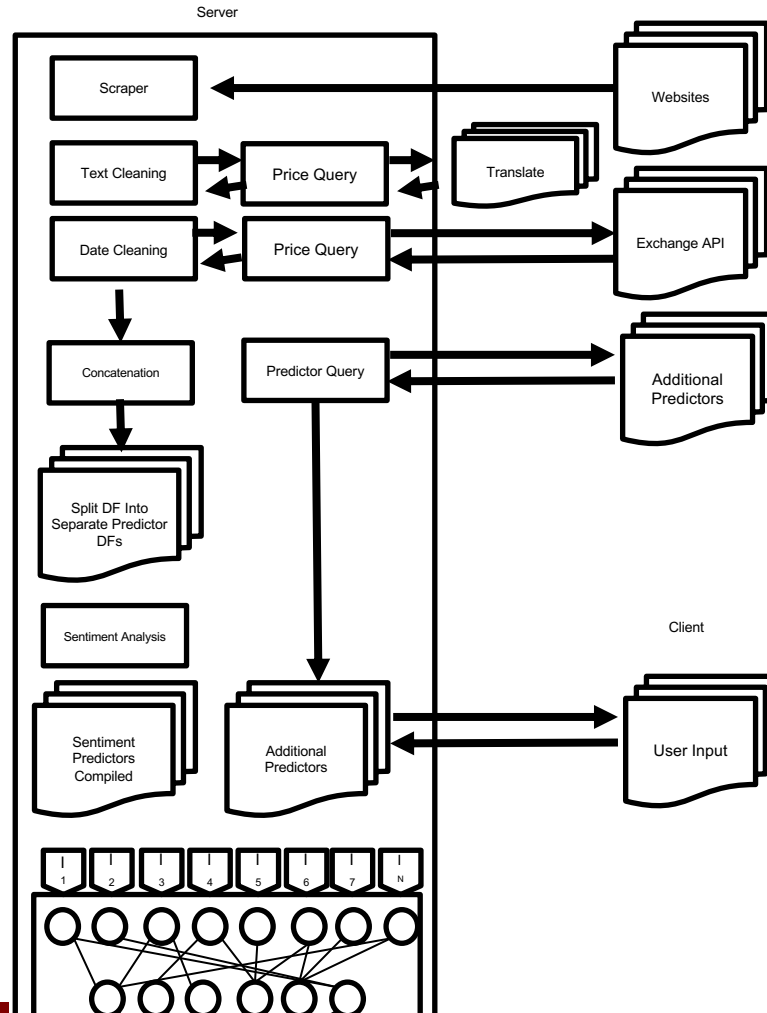
After cleaning up this text, and concatenating the title and content where applicable, a sentiment analysis is run. The cleaned text is also used as a basis for querying a sandbox bitcoin trading environment for the current trading prices simultaneously through an API.

Sentiment analysis

Sentiment analysis will consist of a combination of a more straightforward approach and the use of indicator words as separate sentiment predictors (i.e. bubble, country names, opportunity)

Other predictors

Separate from this we will pinpoint several other predictors such as total trading volume, stock prices etc.



Project Design (2/2)

Neural Network

These variables are all put into a neural network (H2O) to give weights to these predictors and sources. The end result should be two-fold ; a market prediction and a confidence or trend.

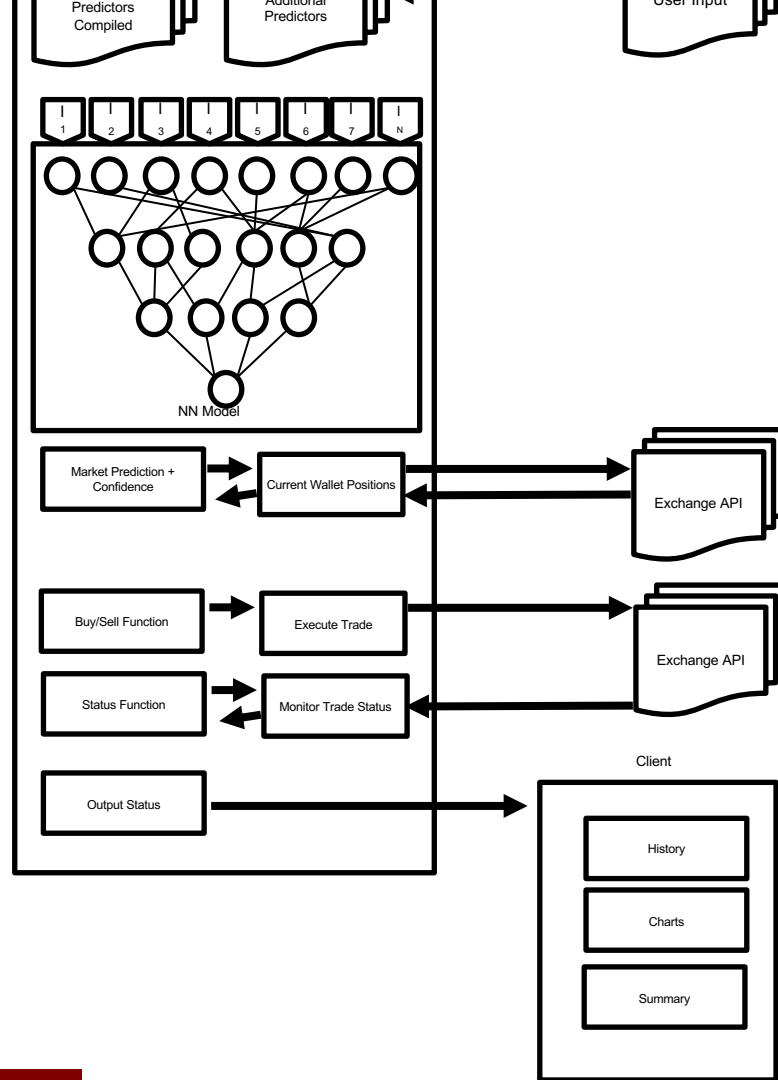
Trading

The exchange is then accessed to obtain our current wallet positions and using a to-be-developed buy/sell function, trades are executed. These are constantly monitored for the status, and feedback is given upon these results to cease or initiate (new) trades.

Feedback

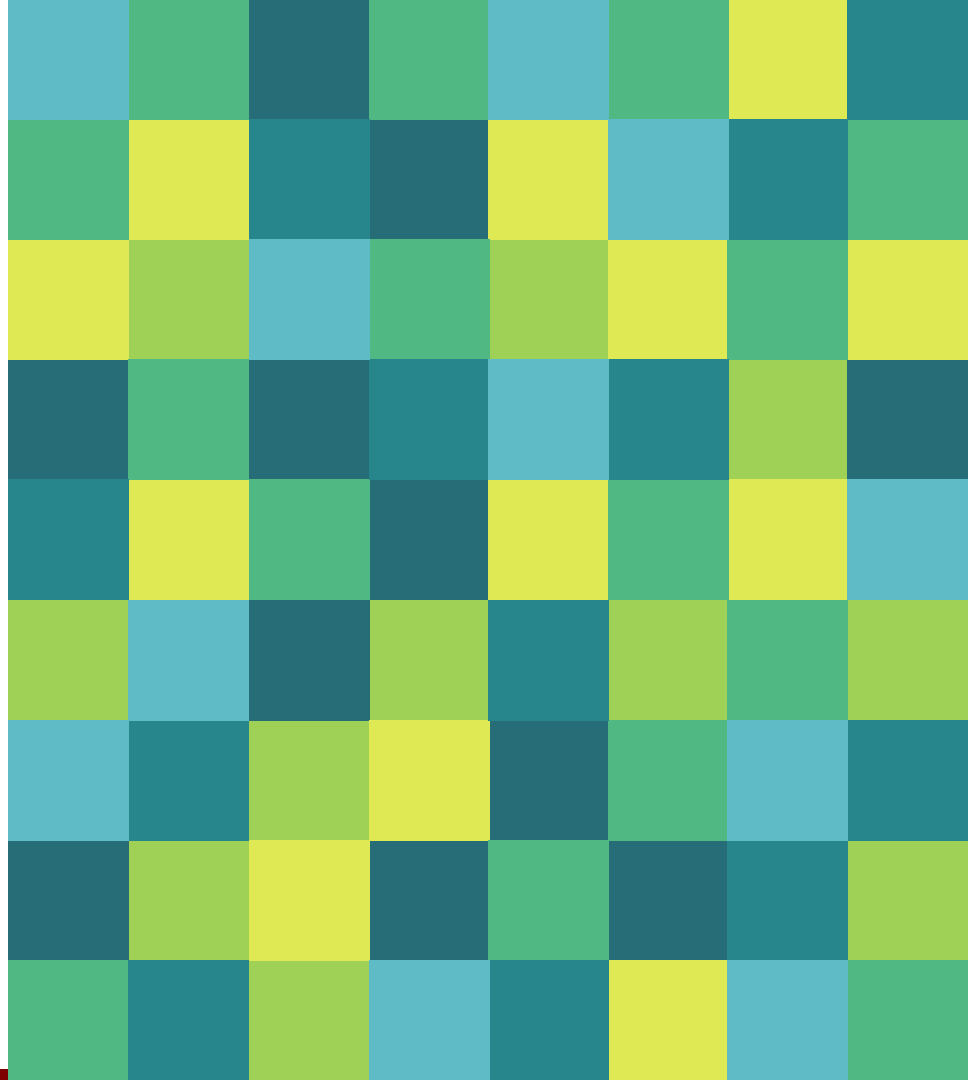
As feedback to our client we provide a phone app highlighting ;

1. Trade history and current status
2. Charts with relevant information contained in the scrapes concerning sentiment.
3. A summary



2.

Current status

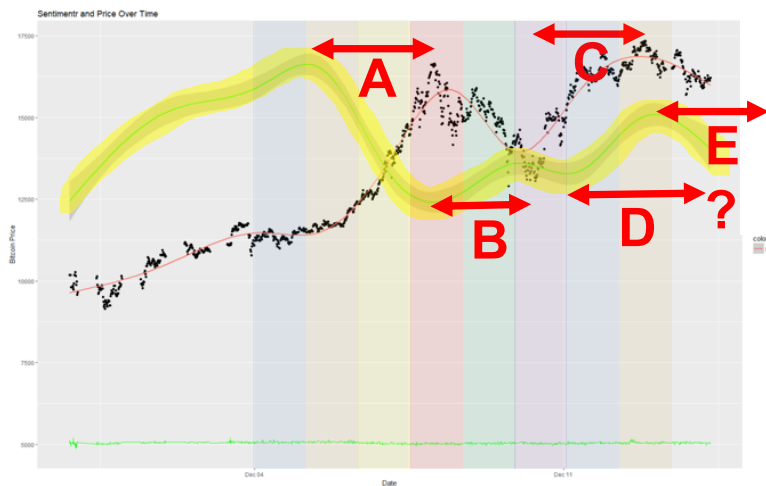


Current status

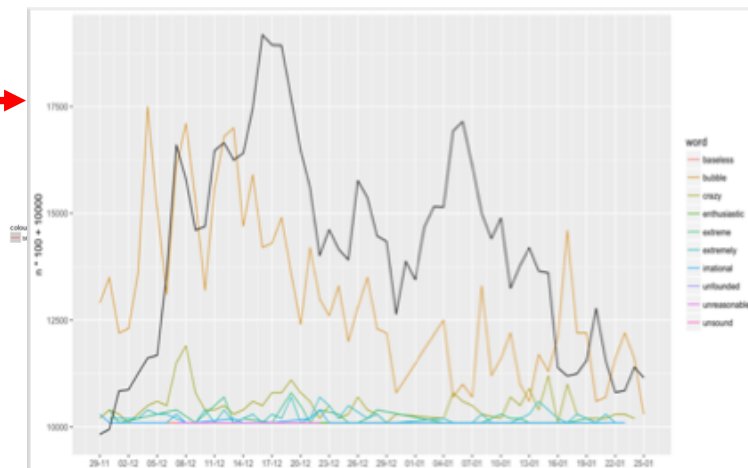
- Scraper (100%)
- Data cleaning function (100%)
- Sentiment Analysis (40%)

We are currently using a dataset of 100 000 observations, of cleaned data, to train and test our prediction model(s).

Data Exploration



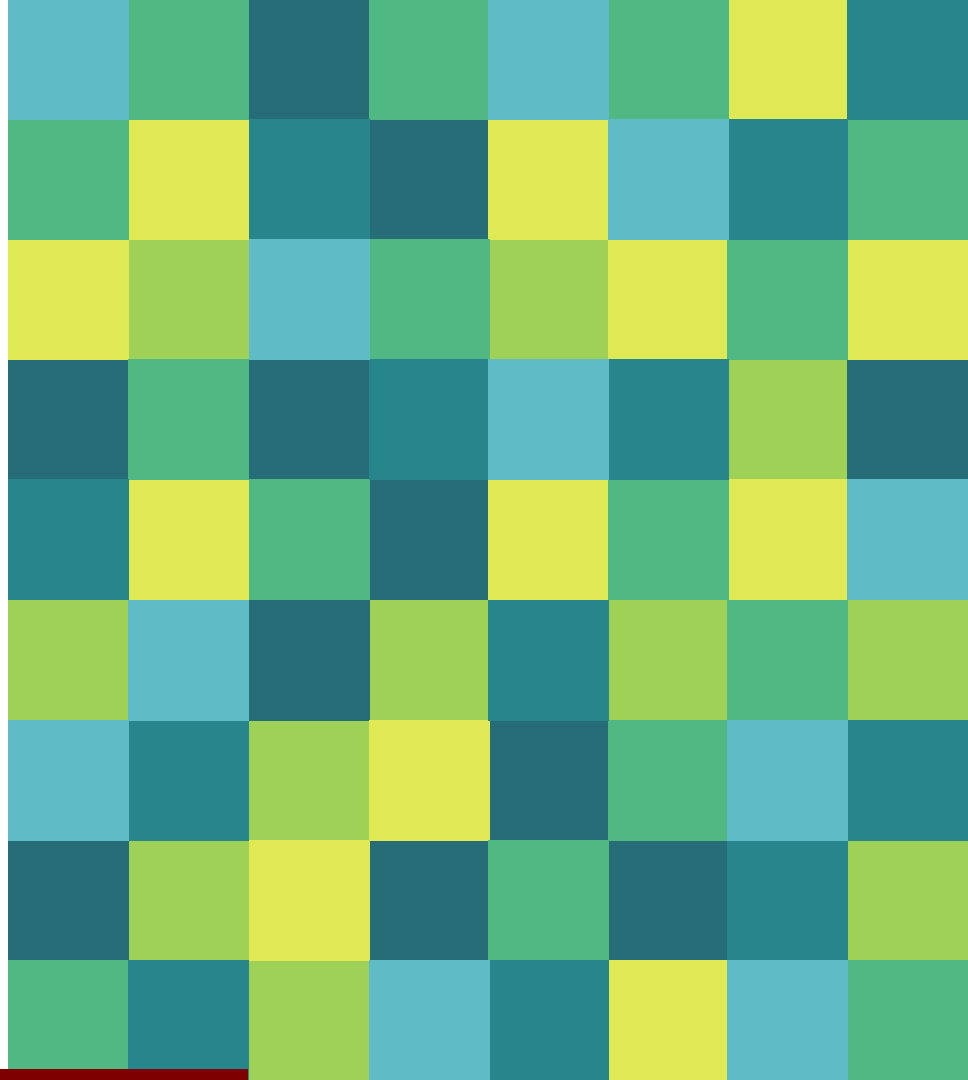
Initial exploration sentiment and exchange price



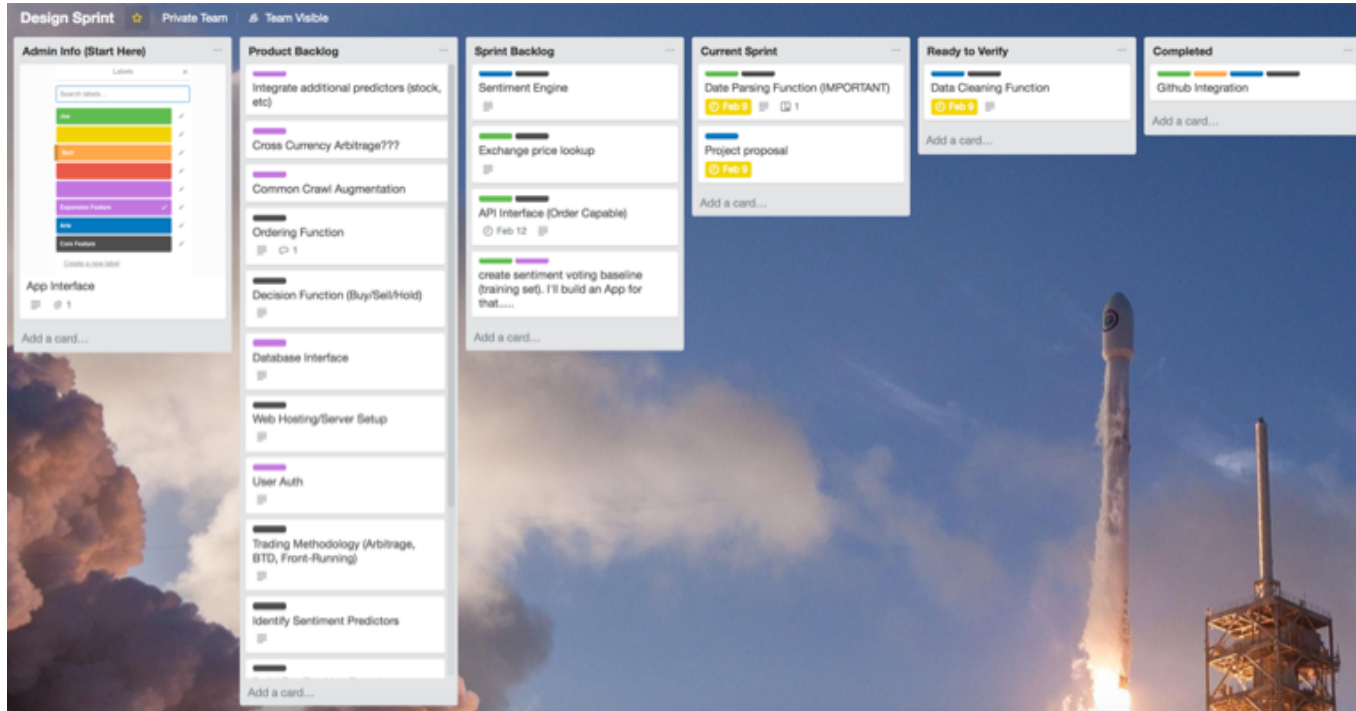
Indicator Word Analysis

3.

Tools



Trello



Trello is used to create and assign tasks, communicate deadlines and track progress. Sprints are weekly and end on Friday afternoon with a team wrap-up.

<https://trello.com/b/cozLjiO3/design-sprint>

GitHub

The screenshot shows the GitHub interface for a repository named 'final project for ubiqum'. At the top, it indicates '40 commits', '1 branch', '0 releases', and '2 contributors'. Below this, there are buttons for 'Branch: master', 'New pull request', 'Create new file', 'Upload files', 'Find file', and 'Clone or download'. The commit history is listed below, showing the latest commit by 'x78163' adding a date testing xls file. The file list includes 'Exchange Trading Scripts', 'Sentiment Engines', 'Supporting Documentation', 'project', '.gitignore', 'README.md', and 'project.Rproj'. The 'README.md' file is selected, showing the text 'project'.

final project for ubiqum Edit

[Add topics](#)

40 commits 1 branch 0 releases 2 contributors

Branch: master New pull request Create new file Upload files Find file Clone or download

x78163 added date testing xls file Latest commit 7f11ddc 38 minutes ago

Exchange Trading Scripts	pushing the latest iteration of the date time cleaning function...s...	19 hours ago
Sentiment Engines	added date testing xls file	38 minutes ago
Supporting Documentation	Changing architecture	an hour ago
project	Testing git ignore again	13 days ago
.gitignore	testing git ignore	13 days ago
README.md	commiting	14 days ago
project.Rproj	commiting	14 days ago

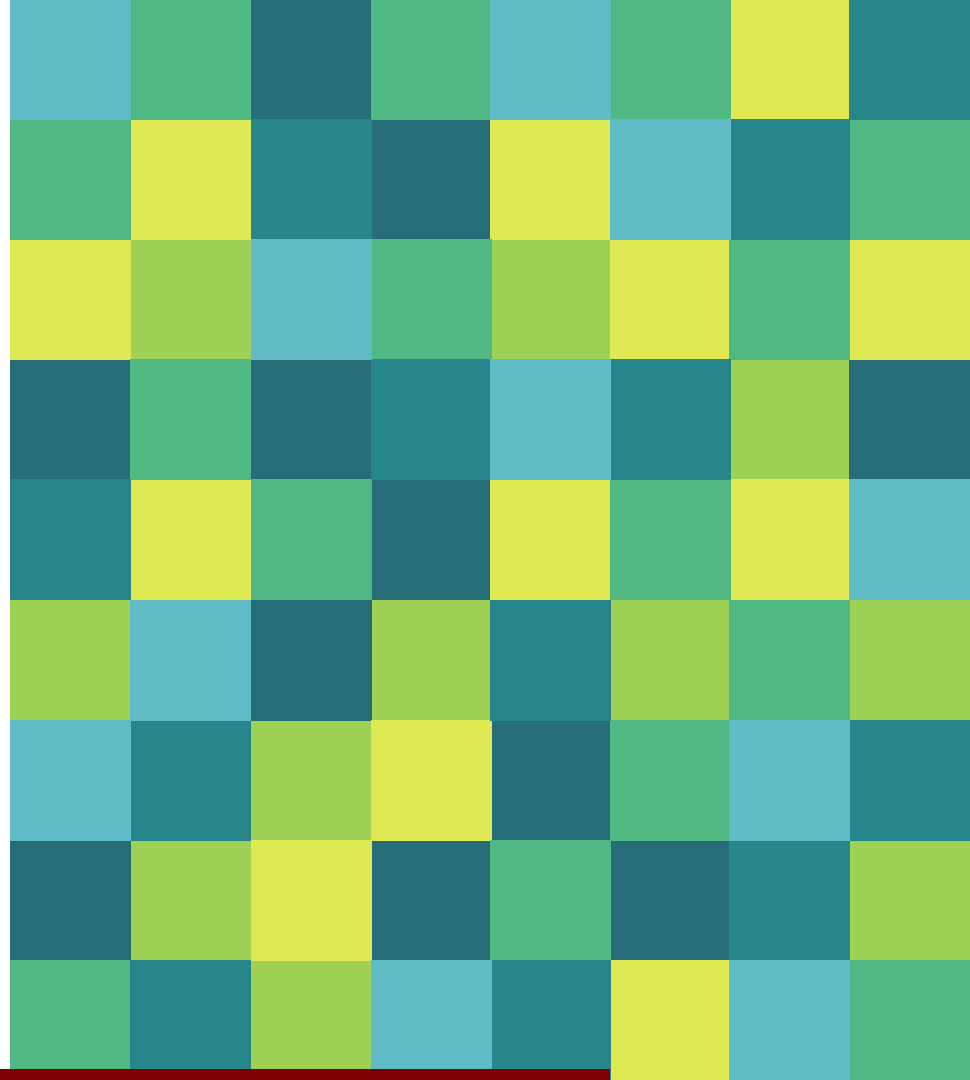
README.md

project

GitHub is the repository where the team publishes their scripts, output and input and other files.

<https://github.com/Ubiquum-Project/project>

Appendix





Sources



South China Morning Post
南華早報

*** Subject to change**

BBC
Bitcoin News
Bloomberg
China Daily
CNBC
Coin Desk
Crypto Coin News
Facebook BTC Group
Facebook Search
Fortune
Free Republic
Google Finance
Google Plus

India Economic Times:
Reddit BTC All
Reddit BTC Bay
Reddit BTC Markets
Reddit BTC Mining
Reddit BTC XT
Reddit Crypto
Reuters
South China Morning Post
Twitter
Wall Street Journal
Yahoo News
YouTube
Zero Hedge

WSJ

BBC

Bloomberg

Mockup app interface



