

# Project Report

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## 1 Ethereum and Tokens Description

### 1.1 Ethereum and ERC20

Ethereum is an innovation that applies some of the technologies and concepts of Bitcoin in computing. Bitcoin is considered a system that maintains a shared global book that securely records all bitcoin bills. Ethereum uses a number of mechanisms similar to Bitcoin (such as blockchain technology and P2P networks) to maintain a shared computing platform that can flexibly and safely run any program the user wants.

### 1.2 Project Tokens

#### 1.2.1 Tierion

Tierion is building a common data validation platform. Tierion's working principle is simply to create a proof that associates data with transactions on a blockchain. This process is called "anchoring." Anyone with this proof can verify the integrity and time stamp of the data without relying on any trusted authority.

#### 1.2.2 Aragon

Aragon's decentralized APP on the Ethereum blockchain allows anyone to create and manage any organization. It implements the basic functions of shareholder roster, token transfer, voting, job appointment, financing, and accounting. It can be defined by modifying the charter. The behavior of organizations on the chain provides opportunities to create and manage decentralized organizations.

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### 1.2.3 Bitqy

Bitqy is also called BQ, which is the official cryptocurrency issued by Bitqyck. Bitqyck will use BQ to scan various cryptocurrencies, including bitcoin and full-service data support and management.

## 2 Project Goal

This project has two parts. The first goal is to filter out all outliers from each tokens and then find out the best distribution for each token. The second part is that we find out the best K that is the number of most active buyers, which bought most tokens or has most number of transactions. And the top K buyers' data gives the best fitted multiple regression model.

### 2.1 Question 1

The tokens we picked is Tierion, Aragon, and Bitqy. Because we cannot find token126, hms and lino in token pirce folder, so we moved down and picked Bitqy as our third token. First of all, we read data file and then filtered out all outliers which amount of tokens per transcation is larger than total supply.

```
1 bitqy <- read_delim('C:/Users/ygaoq/OneDrive/MyDocuments/2019_Spring/
  Statistics/Project/Blockchain-Tokens-Data-Analytics/networkbitqyTX.txt',
  , delim = "_", col_names = F)
2 names(bitqy) <- c('fromID', 'toID', 'unixTime', 'tokenAmount')
3 decimals <- 2
4 supply <- 1 * 10^10
5 #filter out all outliers
6 bitqyFiltered <- filter(bitqy, tokenAmount < decimals * supply)
7 #figure out how many users indruced those unnormal transcation
8 bitqy_outliers <- filter(bitqy, tokenAmount >= decimals * supply)
9 user_outliers <- bitqy_outliers %>% group_by(toID) %>% summarise(n = n())
  %>% ungroup
10 number_users_outliers <- nrow(user_outliers)
```

#### 2.1.1 And a subsubsection

And here you have a list with dots and dashes:

- 
- Dots

- or dashes?

and an enumerated list:

1. With numbers...
2. Which is also nice 😊

### 3 Theory

If you want to add mathematical equations, this may be done either this way:  $a + b \neq \frac{a}{b}$ . You may also add Greek letters like this:  $\alpha$ .

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

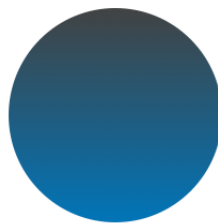


Figure 1: A circle

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of

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Saturday	Sunday
12	18

Table 1: Overview of the weekend

	A	B
C	100	2
D	3	5

Table 2: Random numbers

the original language. There is no need for special content, but the length of words should match the language.

## 4 Research Design

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## 5 Analysis

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## 6 Conclusion

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## References

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## Appendix

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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