THE PROJECT OF WEB DATA MANAGEMENT:

# Ethereum Event Data Analysis

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# 1 Introduction

Ethereum is one of the most popular cryptocurrencies in the world, designed by following the principle of blockchain technology„ which enables the smart contract implemented by Solidity to handle the third-party complex transaction. All of the data of each transactions has been "imprinted" on the Ethereum blockchain and undoubtedly available for the record on Etherscan, in which everyone is able to clearly check every details happened on Ethereum blockchain.

# 2 Outline

The fundamental objective of this project is to implement web application to show a ground analysis of current Ethereum transaction data with desired time period provided in advance.

- Data scraping: Typically we will use Python to fetch nearly thousands of events for the given contract we have chosen. Additionally however, we need to know more about the events specification on Etherscan in the first place so as to facilitate our scraping.
- Data pre-processing: Based on the security aspect of blockchain innovation, there are a variety of encoding mechanisms in Ethereum to protect the data security. The main thing we aim at, in this step, is to decoding the data we scrapped from the first step. we must be fully aware of the encodings there (for instance, after attaining the type of each parameter so you know how to decode them by converting them in the right format.)
- Data analysis: Here are countless of potential points to analysize and exhibit. For example. we are supposed to target at the proportion and variation of currency flows and counts by different events (like bid, mint, sold) since there are different kinds of transactions happened everyday inside a smart contract frame or even decentralized application. Another we should concerns is the tendency of the prize of Ethereum or other fungible tokens engineered by other Solidity standards. Eventually we hope that all of this analysis will be displayed by form of chart/graphics.

# 3 Development

Please catch up with the development of implementation over our github repository