MSc(CS) Dissertation Public Seminar

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Title: Comparison between Blockchain-based and Non-blockchain-based Games

Speaker: Liu Shuyue

Date & Time: April 13 2021, Tuesday, 04:30pm

Zoom Meeting Link: https://hku.zoom.us/j/92423071965

Meeting ID: 924 2307 1965

Password: 391148

Abstract:

Nowadays, blockchain technology becomes one of the most popular technologies in the computer science area and it can be used in many different areas with its security and transparency. The data stored in the traditional database may be hacked or modified easily so that many important transactions or other processes online may be influenced if the data lose or modified. And other technologies like peer-to-peer also have security problems. To deal with this, blockchain technology becomes one of the major solutions.

At the same time, the game becomes more and more popular in people's lives, and there are a lot of transactions in-game. In order to make the transaction more secure and transparent, a blockchain-based game appears with using the blockchain as the database, instead of using the traditional server and other technologies.

In this dissertation, a game is built using blockchain technology and non-blockchain technologies. The player can transact props through the blockchain or other technologies. By building the game, I will find out the difference between the blockchain-based games and non-blockchain-based games and also the merit of it.

About the Speaker:

Liu Shuyue is currently a full-time MSc(CS) student of the Department of Computer Science in the University of Hong Kong. Her supervisor is Dr. TW Chim.

All are welcome!

Tel: 3917-1828 for enquiries

MSc(CS) Dissertation Public Seminar

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Title: Blockchain for AI - Collaborative Neural Architecture Search

Speaker: Sit Chun Yan Enoch

Date & Time: April 13 2021, Tuesday, 05:15pm

Zoom Meeting Link: https://hku.zoom.us/j/92423071965

Meeting ID: 924 2307 1965

Password: 391148

Abstract:

Neural architecture search (NAS) is a search method that aims to find an optimal neural network architecture automatically given a target data set. There are two major branches of NAS. One branch focus on finding a small neural architecture which repeats throughout the entire network that best describe the target data set, whilst the other branch focus on finding the entire structure of the neural network from scratch. One of the major challenges of NAS is that it takes a significant of computational resource and time to train and evaluate a broad spectrum of neural architectures.

In this dissertation, a collaborative NAS (CoNAS) method is proposed such that the work of evaluation and training of different neural architectures can effectively distributed across different nodes that works independent of one another. Results had been shown that this collaborative method allows different entities to collaborate to increase effectiveness of neural architecture search. A rewarding mechanism has also been proposed to reward those who devote the computational resource during the search. Hence, incentivized people to join the search collaboratively.

About the Speaker:

Sit Chun Yan Enoch is currently a part-time MSc(CS) student of the Department of Computer Science in the University of Hong Kong. His supervisor is Prof. SM Yiu.

All are welcome!

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MSc(CS) Dissertation Public Seminar

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Title: Sentiment Scoring System for China's Stock Market Based on Traders' Real-time Posts

Speaker: Lin Jiabao

Date & Time: April 13 2021, Tuesday, 06:00pm

Zoom Meeting Link: https://hku.zoom.us/j/92423071965

Meeting ID: 924 2307 1965

Password: 391148

Abstract:

Recently, there are many researchers spending efforts in the study of the correlation of post sentiments from social media and the movement of the stock market, which, however, mainly focused on the stock market in the United States and investors' posts on Twitter. This dissertation tries to find the relationship between the traders' sentiments and the fluctuation of the stock market in mainland China, where one of the largest stock markets with over 80 trillion Chinese yuan (over 12 trillion US dollars) in market capitalization, and 177 million registered investors locates (as of December 2020). This dissertation crawled traders' comment data from the most popular financial service company in mainland China. With the help of machine learning models, the movement of the stock price is employed to train the model with the contents in traders' posts as the input and achieved a good accuracy on the test set. A prediction model is further proposed that uses the sentiment of the traders to forecast the movement of the market. With a trend following strategy by employing Bollinger Band on the sentiment data, a total return of 7.63% is obtained compared to a return of 1.36% with the buy-and-hold strategy within the period between February 1 and March 8 in 2021.

About the Speaker:

Lin Jiabao is currently a full-time MSc(CS) student of the Department of Computer Science in the University of Hong Kong. His supervisor is Dr. JR Zhang.

All are welcome!

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MSc(CS) Dissertation Public Seminar

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Title: Decentral Bank: An Autonomous Financial Protocol

Speaker: Lie Jen Houng

Date & Time: April 13 2021, Tuesday, 06:40pm

Zoom Meeting Link: https://hku.zoom.us/j/92423071965

Meeting ID: 924 2307 1965

Password: 391148

Abstract:

Decentralized Finance (DeFi) emerging on Ethereum is showing promising results toward the creation of a disintermediated financial system. In this paper, we describe a new DeFi system design which is able to integrate token swapping (AMM), borrowing and stablecoin into one single, unified system. We believe that the new design increases capital efficiency compared to other DeFi systems exist today.

About the Speaker:

Lie Jen Houng is currently a part-time MSc(CS) student of the Department of Computer Science in the University of Hong Kong. His supervisor is Prof. SM Yiu.

All are welcome!

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