



## Deep Learning Meets Blockchain

What is the first thing you think of after hearing blockchain? Bitcoin? Ethereum? Or a lot of money? As of October 2020, these are all out of date. Decentralized Finance, or DeFi, has become the most popular topic in blockchain. DeFi is the movement that allows users to utilize financial services such as borrowing, lending, and trading without the need to rely on centralized entities. The total value locked by DeFi in August 2020 is measured around 7 billion dollars.

Compared to traditional financial markets that require users involving in the current banking system, DeFi makes finance accessible to everyone without any form of censorship and allows users to use various financial services without any restriction on race, religion, age, nationality, or geography. However, it is unclear how users should behave in the DeFi market to benefit themselves and protect assets security.



In this thesis, we explore user behavior in the DeFi market with deep learning algorithms. We also consider how to defend existing protocol attacks, such as frontrunning attack and sandwich attack.

**Requirements:** Experiences in deep learning and familiarity with at least one deep learning framework, e.g., TensorFlow, Pytorch, are required. Interest in blockchain would be beneficial.

We will have weekly meetings to address questions, discuss progress, and think about future ideas.

**Interested? Please contact us for more details!**

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