MSc Defence

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Exploring Vulnerabilities and Anomalies in NFT Marketplaces

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Abstract:

Since the invention of blockchain, an increasing number of people have been working on creating various decentralised financial (DeFi) products. NFTs, or non-fungible tokens, are among the most widely used DeFi products. The NFT market is a developing one that is expanding quickly and drawing more players. However, the NFT market is now experiencing a number of technological and financial security challenges. Our goal in this thesis is to present a systematic and thorough assessment of NFT security challenges, including technical flaws, fraud, market manipulation, and money laundering, and to suggest cutting-edge detection methods for the rug-and-pull and wash trade with utilizing machine learning model and graph-based model, respectively. The validation findings from random sampling reveal that our detection techniques are successful in identifying targeted dishonesty.