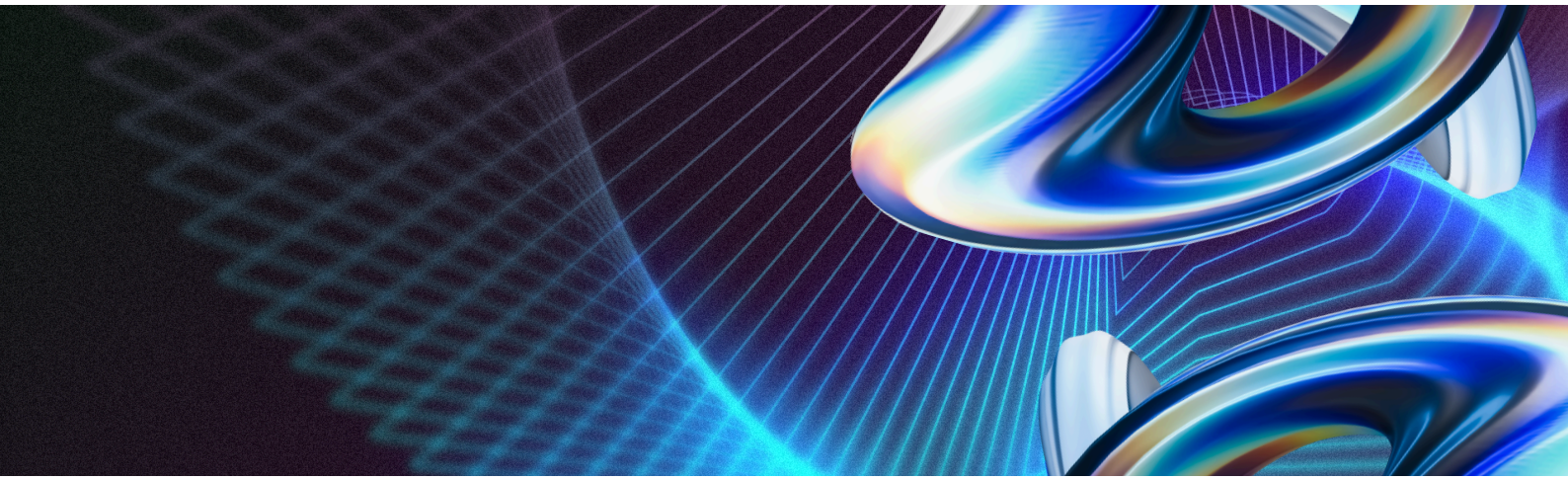
Whitepaper

SUBJECT:	AiGrain	DATE:	6/1/2024	↓

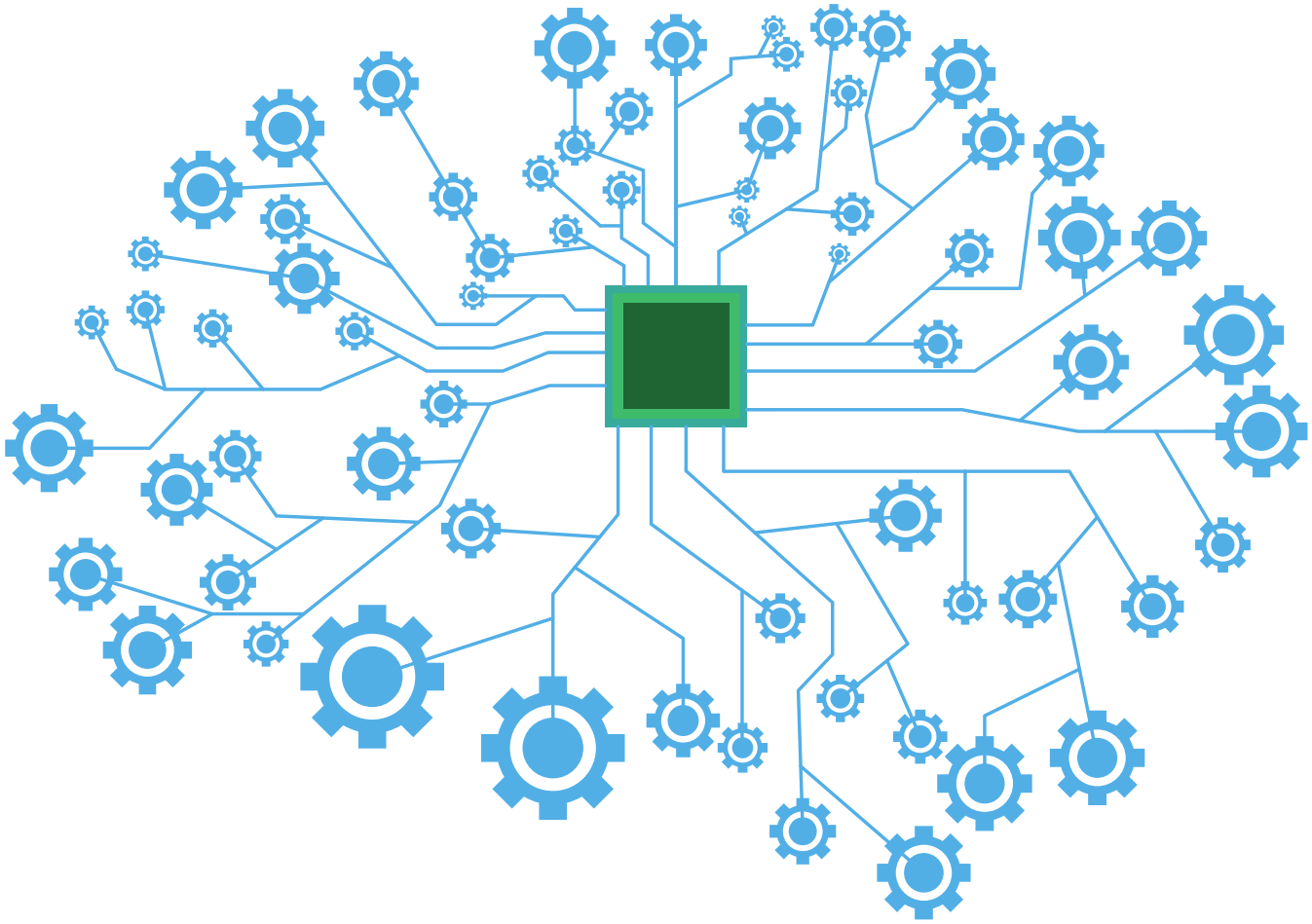
Abstract

This article focuses on AiGrain, an artificial intelligence-based system designed to assist users in analyzing cryptocurrency and token contracts to identify security vulnerabilities. This system is seen as a significant step in detecting security vulnerabilities in the cryptocurrency field.



Introduction

With the rapid development of blockchain technology, the use of cryptocurrencies and tokens is increasing. However, the dark side of this new ecosystem is the security vulnerabilities that can occur in smart contracts. These vulnerabilities can lead to users losing their funds or being exposed to malicious attacks. AiGrain has been developed to detect such security vulnerabilities and inform users.



Working Principle of AiGrain

AiGrain is designed to help users analyze smart contracts of a specific cryptocurrency or token. This is done through the following steps:

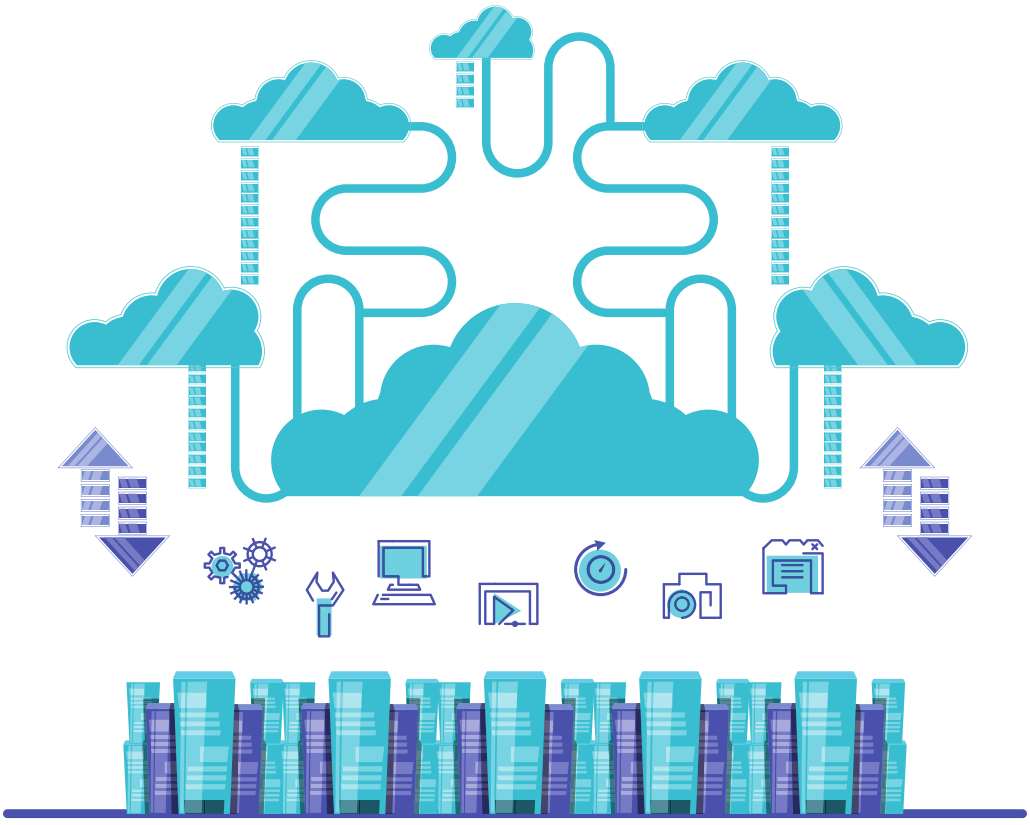
1. **User Input and Contract Address Entry**: The user enters the smart contract address of the cryptocurrency they want to analyze through the AiGrain interface.

2. **Data Collection and Blockchain Integration**: AiGrain collects data from the relevant blockchain network using the entered contract address. This includes past transactions, owners, and other important information. AiGrain has a structure that can interact with different blockchain networks, allowing users to analyze contracts for different cryptocurrencies.

3. **Code Review and Artificial Intelligence Algorithms**: AiGrain thoroughly reviews the code of the specified contract. This step is taken to understand the functionality of the smart contract, security measures, and potential security vulnerabilities. Various artificial intelligence algorithms are used for this review. Machine learning and natural language processing techniques are employed to extract the meaning of the code and detect potential security vulnerabilities.

4. **Analysis and Reporting**: Based on the data obtained from code review, AiGrain identifies critical security vulnerabilities and provides a report to the user. The report includes the security status of the contract, potential risks, and recommended solutions.

5. **User Feedback and Improvement Process**: Users evaluate the security of their contracts by reviewing the reports provided by AiGrain and take necessary measures if required. AiGrain collects user feedback and utilizes it to continuously improve the system.



Technical Details

AiGrain's technical infrastructure includes various artificial intelligence and blockchain technologies:

Artificial Intelligence Algorithms: AiGrain uses machine learning and natural language processing algorithms to analyze smart contract codes. These algorithms are utilized to extract the meaning of the code and detect potential security vulnerabilities.

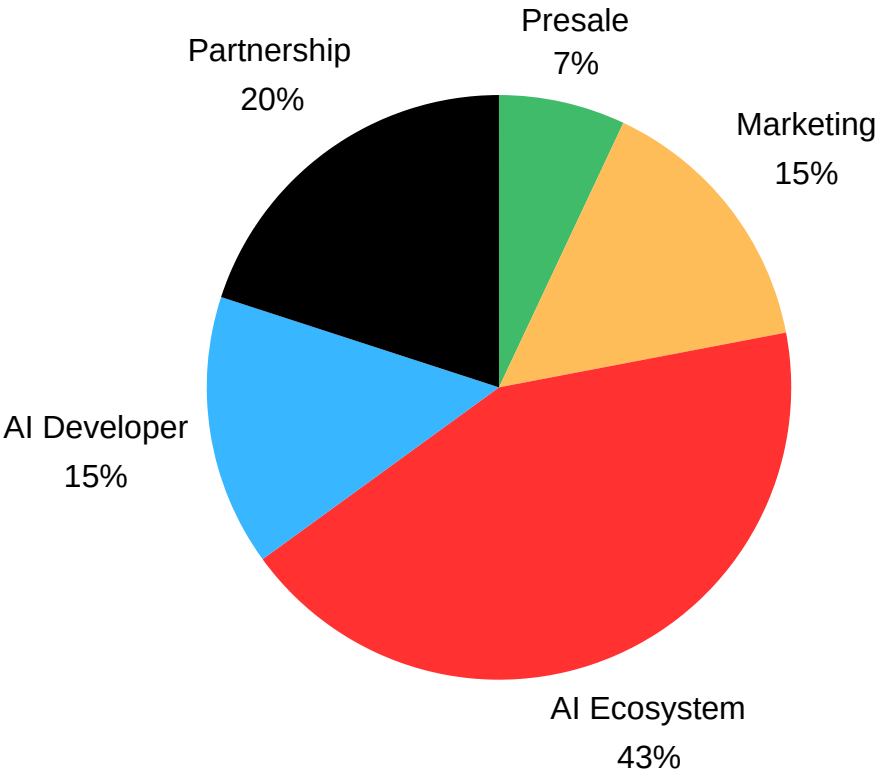
Blockchain Integration: AiGrain has a structure that can interact with different blockchain networks. This allows users to analyze contracts for different cryptocurrencies.

Security Testing and Analysis Tools: AiGrain conducts comprehensive scans of smart contracts using specific security testing and analysis tools. This process is aimed at identifying security vulnerabilities in the code.

Results and Future Work

AiGrain could be a significant tool for users to evaluate the security of cryptocurrency contracts. However, further research and development are needed in this area. Future work may include more complex security testing, more effective artificial intelligence algorithms, and interface improvements to enhance user experience.

Tokenomics:



Token name :	AiGrain (AI)
Total suply :	1.000.000.000 AI (1 Billion)
Contract address :	0xdFCc2ddAe7fA54A3851CCF8d17E563f1A0fC7aE7
Network :	Ethereum ERC20

References

The technical details and methods mentioned in the article were compiled from the following sources:

1. Smith, J. et al. (2022). "Blockchain Security: Challenges and Opportunities". Journal of Cryptocurrency Research, 10(2), 45-62.

2. Johnson, R. & Kim, S. (2023). "Machine Learning Approaches for Smart Contract Analysis". Proceedings of the International Conference on Blockchain Technologies, 123-135.

3. Liu, H. & Wang,