

## ABSTRACT

**Master's Thesis:** 89 pages, 21 images, 15 tables, 1 attachments, 36 references.

**Relevance** Blockchain - technology of storage of information, which has found application in financial transactions. Increasingly, people around the world are faced with the term "blockchain", but not everyone understands exactly how built the mechanism of the system. This technology can make a significant contribution to the development of modern business and to facilitate the life of society. In this regard, the actual scientific task is to evaluate the blocks of blocks, which will determine the reliability and possible prospects for a certain crippling currency.

**Connection of research with scientific programs, plans, topics.** The work was performed at the the department of Computer-Aided Management And Data Processing Systems (ASOIU) of the National Technical University of Ukraine "Kyiv Polytechnic Institute. Igor Sikorsky" within the frame of the topic « Research of typical architectural templates of database structures for a wide range of practical tasks» (№ 0117U000921).

**The purpose and objectives of the study** is to simplify the analysis of behavior and define the profile of the user at his address.

To achieve the goal, you must accomplish the following **tasks**:

- perform an overview of existing methods and metrics for evaluating block units in a blockchain network;
- perform a comparative analysis of various methods and models of evaluation of transaction blocks in the blockchain network;
- perform task setting for analysis of transaction chains;
- to develop algorithmic support for solving the problem of clustering of addresses in the blockchain network;
- develop a prototype application;

– perform the analysis of the results.

**The object of study** – process of data analysis of blockchain.

**Subject of research** – methods of analysis of data of blockchain.

**Methods** – methods of mathematical statistics.

**Scientific novelty of the research.** In the work presented, methods for analyzing user behavior by the properties of their transactions were investigated.

Based on a study of methods for analyzing the behavior of users on the properties of their transactions, clustered addresses in the network by the time and amount of transactions made in order to predict the behavior of existing and new users and the ability to analyze the network.

Due to the growing popularity of this technology and increasing the number of ways to use it, it becomes necessary to conduct an analysis that will reduce risks when using a blockchain network and identify the roles of users in it.

BLOCKCHAIN TECHNOLOGY; BLOCKING; STORAGE OF DATA;  
BLOCK; MINER; PARTICIPANTS; RECORDS; KEY; COMPATIBILITY OF  
THE NETWORK, COMPATIBILITY OF HASHING