

## **ABSTRACT**

The thesis: 96 p., 12 fig., 15 tabl., 2 annexes, 13 sources.

Solving the problem of reliability of the recognition systems on the example of detection of fraudulent transactions using artificial immune systems is described in the diploma.

Theoretical information regarding artificial immune systems is provided. Analyzed the work of artificial immune system, developed a software application that implements its work.

Object of study: System for fraudulent transaction recognition.

Subject of research: Artificial immune systems.

Purpose: Develop a method of classification for recognition problems "friend or foe" with a high degree of reliability.

Methods and apparatus: Problem classification is made using immune system, software written in Python 3.6 among Jupiter Notebook.

The results: The work of artificial immune system in problem of reliability was studied.

Uses: Decision support systems or other systems that require solving classification problems.

**RELIABILITY OF RECOGNITION SYSTEMS, PROBLEM "FRIEND OR FOE", ARTIFICIAL IMMUNE SYSTEMS, NEGATIVE SELECTION ALGORITHM.**