

## ABSTRACT

Diploma work: 122 p., 8 fig., 6 tabl., 2 appendixes, 10 bibliographic references.

The object of the study – games with incomplete information, specifically poker.

The subject of the study – application of automated decision support systems to games with incomplete information.

The purpose of the study - analyze the subject of a study and investigate the effectiveness of existing methods of decision-making in games with incomplete information and develop our own system based on the studied methods.

The methods of the study – methods of Nash equilibrium in games with incomplete information.

The relevance of the study – In modern applied game theory and artificial intelligence, there is growing interest concerning the study of games with incomplete information. Automated agents working with games with incomplete information are widely used in many application areas: in engineering, economics, insurance, medicine and others.

Usage of the study – Online gambling systems.

The results of the study - Subsystem of automated decision making in games with incomplete information, specifically poker, which is based on a modified algorithm to minimize regret resistance has been developed.

It compared the results with other subsystem solutions to the problem. The novelty of the proposed method is the complete automation of decision making and adaptation to the real online poker systems.

Further improvements of the study – to improve results, it is necessary to adapt the system to work with the best algorithms, while finding the most optimal algorithm analysis of games of incomplete information in terms of both

computational resources needed to train the system and the adoption of decisions at every turn.

GAMES WITH INCOMPLETE INFORMATION, NASH EQUILIBRIUM, COUNTERFACTUAL REGRET MINIMIZATION, INTELLIGENT DECISION MAKING SYSTEMS