

## ABSTRACT

**Theme of the Graduation Thesis:** “Development of a data mining system for a commercial enterprise (using an example)”

**Author:** Dzhazova Diana Arturovna

**Thesis tutor:** Candidate of Technical Sciences, assistant professor of department of Information and Communication Technologies, Mathematics and Information Security Timchenko Olga Viktorovna.

**Information about the contracting authority:** Scientific and Educational Innovation Complex «Information and Communication and Mathematical Technologies» of Pyatigorsk State University.

**Relevance of the research topic:** One of the global modern trends in economic development is a sharp increase in information. The improvement of information processing becomes more significant in the transition to the information society. World experience shows that prospects in this direction are based on the use of intelligent computing methods. In this regard, the search for patterns in poorly structured data is improved, and obtaining information in the conditions of an “information explosion” becomes much more effective. Artificial intelligence methods are becoming an important part of the business.

**Objective:** develop a data mining system for a commercial enterprise. The system under development will allow predicting the development of the enterprise economy in uncertain conditions.

**Tasks:**

- review and analysis of modern data mining methods;
- development of the architecture of the designed analysis and forecasting system;
- development of a software product that implements intellectual analysis and forecast;
- evaluation the effectiveness of the analysis and

forecasting system.

**Theoretical and practical significance of the research** consists in testing the technology of intellectual analysis and forecasting the activities of the commercial enterprise.

**Results of the research:** the developed system of intellectual analysis and forecasting. The system includes a developed algorithm, a relevant structure of the system, a software interface and the methodology for assessing the result of forecasting. The necessity of developing an individual software product well founded. The developed software product takes into account the specifics of the company and fulfills all the tasks assigned to it.

**Recommendations:** the obtained results and the developed software product are recommended for implementation in small enterprises.