ABSTRACT

Master's thesis: 104 pages, 23 figures, 27 tables, 48 sources, 1 appendix.

Relevance: Nowadays, doing business usually involves mandatory contact with customers or users in one form or another. Most modern companies, whose activities are related to information technologies, service provision, banking, etc., have divisions or departments in their composition that perform the functions of providing technical support, accepting complaints about the quality of service, or performing any other type of contact with consumers

That is why, as the business develops and grows, companies are forced to attract more and more employees to serve the needs of customers online, which in turn leads to an increase in the cost of maintaining customer contact departments and a decrease in the profitability of the entire business.

The purpose of this work is to build an intelligent automated text message classification system based on machine learning, which allows businesses to optimize and greatly simplify the process of communicating with customers, thereby reducing the number of personnel required to perform this work manually and reducing the costs of conducting this activity.

The purpose of the research is to optimize the process of processing large volumes of incoming messages and reduce the costs of maintaining customer contact departments for enterprises.

To achieve the goal of research the following steps must be taken:

– analysis of modern machine learning methods that can be used to process text data;

– analysis of machine learning methods for their effectiveness;

– building an intelligent system for classifying incoming messages based on machine learning methods for enterprises.

The object of research is the process of communication with clients in technology companies and companies of the financial sector.

The subject of research is modern methods of machine learning, classification algorithms.

The scientific novelty of the obtained results lies in the optimization of the existing processes of communication with customers in companies due to the introduction of an automated system for processing and classifying incoming messages and requests, which allows reducing the company's estimates for maintaining contact centers.

OPTIMIZATION, CLASSIFICATION, MACHINE LEARNING, ARTIFICIAL INTELLIGENCE, MESSAGES, CUSTOMER, TECHNICAL SUPPORT, CUSTOMER COMMUNICATIONS