ABSTRACT

The thesis: 91 p., 8 fig., 14 tabl., 2 annexes, 25 sources.

This work explores problems of machine reading comprehension and reading comprehension question answering with neural networks. Theoretical foundations of the range of natural language processing and machine learning methods for solving this task are given. Neural networks of bidirectional attention flow and Match-LSTM are analyzed, an exploration is conducted for the results of their work with datasets SQuAD and MS MARCO. The results are compared to the results of human performance and state-of-the-art models.

Object of study: Machine comprehension of text task.

Subject of research: Neural networks that model reading comprehension question answering task solutions.

Purpose: The work is devoted to the subject of the use of immune networks for solving modern multiextremal optimization problems.

The results and their novelty: software application for training neural network models on datasets SQuAD and MS MARCO. The results of training the networks on these datasets are obtained.

Uses: systems of intellectual search, virtual personal assistants, chatbots.

NEURAL NETWORKS, MACHINE READING COMPREHENSION, MACHINE READING, NATURAL LANGUAGE PROCESSING, MATCH-LSTM, BIDIRECTIONAL ATTENTION FLOW NETWORK