

## ABSTRACT

The thesis is presented in 50 pages. It contains 2 appendixes and bibliography of 13 references. 32 figures are given in the thesis.

The goal of the thesis is to develop mathematical and software tools for solving the problem of text analysis from social networks.

In the thesis, existing solutions are analyzed, such as artificial neural networks, grounded theory, expert estimates and TF/IDF. They are compared in terms of the accuracy of obtained results, algorithm efficiency and method adaptation to fuzzy data. In the thesis, TF/IDF and Mamdani algorithm are used to solve the task.

Rules were empirically created for chosen tweets corpus. The automated system implementing the chosen method is developed. The developed system is tested.

**Keywords:** social networks, Twitter, analysis, text, Mamdani, TF/IDF