

ABSTRACT

The thesis is presented in 53 pages. It contains bibliography of 19 references. Seven figures and 6 tables are given in the thesis.

The goal of the thesis is to develop mathematical and software tools for knowledge from natural texts acquiring, structuring and ontology building.

In the thesis, existing approaches are analyzed, such as production rules, semantic network, frame system, propositional logic, first order predicate logic, fuzzy logic and growing pyramid network. They are compared in terms of the knowledge representation for classification task solving. In the thesis, growing pyramid network approach is used to solve the task.

Classification algorithm based on growing pyramid network control vertexes is implemented. The automated system implementing the chosen method is developed. The developed system is tested.

Keywords: knowledge engineering, growing pyramid networks, object classification, machine learning, temporal knowledge bases.

