

Part of this thesis consists of the implementation of my own simple space game which serves as an experimenting environment for testing different approaches of artificial intelligence.

There have been created abstractions in a form of sensoric methods and action plans as a transition between low level and high level information about game state and actions.

These abstractions help algorithms of artificial intelligence with game agent manipulation.

As far as algorithms are considered I chose genetic programming and Deep Q-learning as main approaches for intelligent agent development.

Final part contains description of behaviour of developed agents and discussion of performed experiments.