

Abstrakt The aim of this work is the implementation of the game Risk and exploration how to develop artificial intelligence into game. Game implementation and artificial intelligence experiments are written in C# programming language. Two approaches are tested in the development of artificial intelligence. One approach uses the Monte Carlo tree search algorithm (MCTS) with two different heuristics and the other tries to solve the problem with neural networks. Neural networks have two uses. One use is for the artificial intelligence itself and the second use is in one of the heuristics. Through the research, we found that the best player is the artificial intelligence using MCTS, but on big maps it has problem. On the other hand, the artificial intelligence with neural network can play on any map and therefore could potentially be another aim of research. The result of the work is the basis for further development of artificial intelligence.