

The bachelor paper deals with the development of artificial intelligence for the Carcassonne board game for two to five players. Different approaches to creating a suitable game strategy are presented. Then, selected strategies are tested. Most of the paper is dedicated to the development by means of genetic algorithms. The paper presents detailed results of the comparison of all implemented artificial intelligences. In addition, it explains how the most successful decision-making method works. The most advanced artificial intelligences are capable of defeating human players.

Additionally, the game environment for this game was implemented. It provides a graphical user interface application that offers a human-to-computer gameplay and a simple console application to perform the artificial intelligence performance tests.