

This bachelor thesis provides an introduction to game theory and artificial intelligence methods, specifically for games with incomplete information, and a playable application of the game based on the Scotland Yard on randomly generated maps with the option to play with a human or artificial players. In addition to the basic concepts of game theory, I introduce two related bachelor theses and the currently strongest and most general algorithm, Student of Games. I focus on implementing an advanced artificial intelligence algorithm. The thesis offers two different AI players. The first utilizes heuristics based on the properties of the game domain, while the second utilizes ISMCTS. Players are tested against each other in experiments. The results show that they perform differently, providing the user with a range of AI opponent strengths.