FACULTY OF MATHEMATICS AND PHYSICS
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BACHELOR THESIS

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Board game with artificial intelligence

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Supervisor of the bachelor thesis: Mgr. Martin Pilát, Ph.D.

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Most of all I want to thank my supervisor for his help and advice. I also thank all of my family and friends for being there for me along the way.

Title: Board game with artificial intelligence

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Abstract: Multiplayer board games with imperfect information present a difficult challenge for many common game-playing algorithms. Studying their behavior in such games can be difficult, because existing implementations of such games have poor support for artificial intelligence. This thesis aims to implement an imperfect information multiplayer board game in a way that provides a framework for developing and testing artificial intelligences for board games with the aforementioned qualities. Furthermore, this thesis explores the implementation of several algorithms for the game. This aims to showcase the artificial intelligence framework, as well as to analyze the performance of existing algorithms when applied to a board game with elements such as hidden information and multiple players.

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An example citation: Anděl [2007]

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Bibliography

J. Anděl. *Základy matematické statistiky*. Druhé opravené vydání. Matfyzpress, Praha, 2007. ISBN 80-7378-001-1.

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