Title

Automated Creation of Puzzle games with Constraint Programming

Researcher

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Description

There is a history of generating puzzles using A.I., from Chess problems to Sudoku levels. Recently there has been progress in generating puzzles, and also measuring the difficulty of these puzzles, for a human player. There are various kinds of puzzles and I would implement one classic puzzle named "match three" in this project. This project aims to solve "match three" puzzles and measure the difficulty of "match three" puzzles.

Objectives

The main aim of this project is to automatically generate puzzles and create engines to solve puzzles. This project could involve formulating "match three" rules, implementing simulations of "match three" puzzles, and performing experiments which measure how well the difficulty measure lines up with real users. Through implementing engines of solving "match three" puzzles, puzzles would be divided into three difficult levels ---- easy, medium and hard. Then, real users try to solve the same puzzles and record their time spending in solving puzzles and also divide puzzles into three difficult levels. Compare the results performed by computers and humans and evaluate the engine ability on classifying puzzles difficult levels.

Ethics

Have submitted Preliminary ethics form.

Resources

No extra devices or other resources.