INF

FAKULTÄT FÜR
INFORMATIK

NI controller

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Overview

- Evolutionary Algorithm
- Sliding Window
- Pessimistic Iteration
- Adaptive Pathlength
- Heuristic and Reward
- Heuristic Switch
- Gamedetection

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Evolutionary Algorithm

- Schriftgröße 18

Sliding Window

- Schriftgröße 18

Pessimistic Iteration

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Adaptive Pathlength

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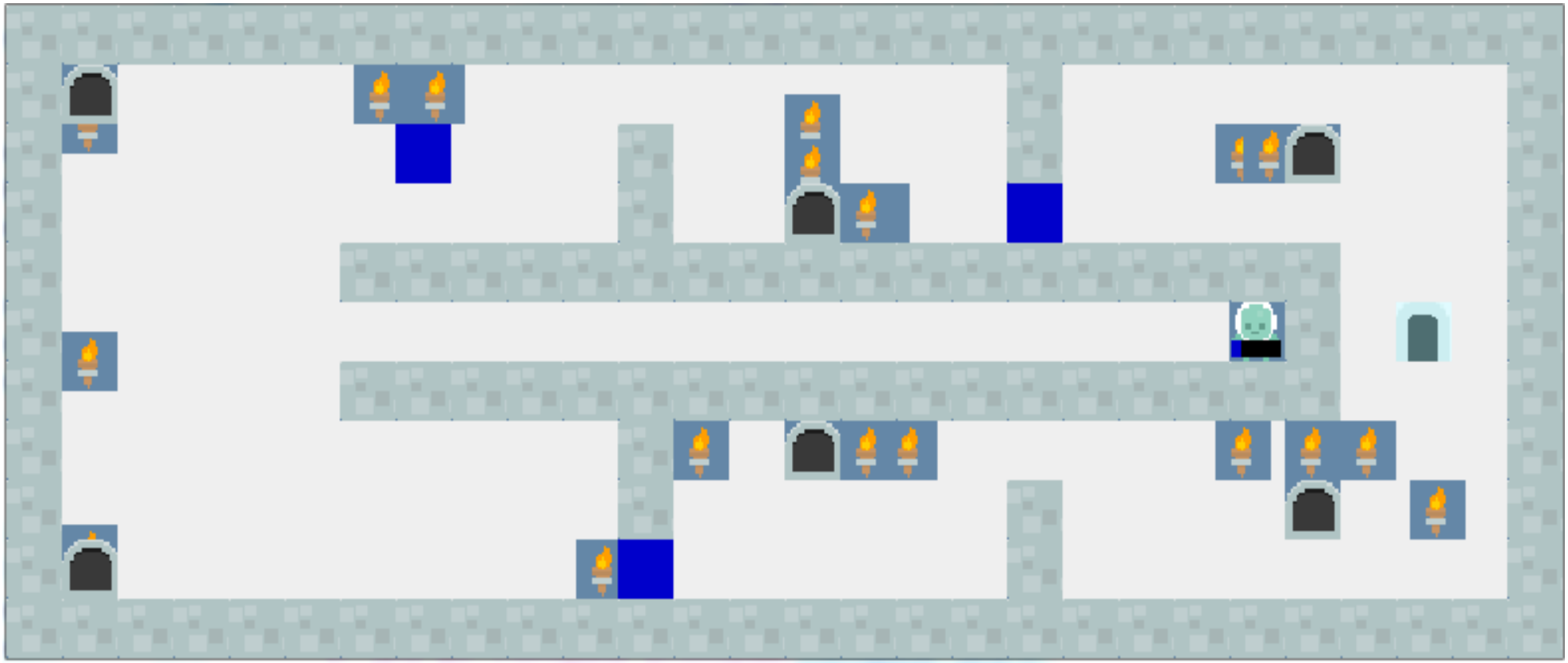
Heuristic and Reward

- Different ways to evaluate a path:
  - 1. Reward
    - Depends on gamescore and win/lose
  - 2. Heurstic Value
    - Is generated for every state in the path
    - Different Targets:
      - NPC
      - 2x Portal
      - ect...
- Compare two paths:
  - When Reward == 0 → use the heuristic value

Heuristic Switch

- Sometimes one game needs different heuristics

- approaches:
  - Switch heuristic after a defined number of timesteps
  - Switch heuristic randomly



Gamedetection

- Detect the game which is played:
  - Generate String of Objects in the game (npc, portal,...) → store hash value
  - Constructor: put known hash values in hash set
  - At the beginning of every game → check which game is played
  - Set settings depending on the game (pathlength, heuristic, …)
- Improved performance in the 20 known games
- Did not decrease performance in the test set
  - No game is detected → standardsettings

References

- First
- Second
- ….