ZHED and Reinforcement Learning

Faculdade de Engenharia da Universidade do Porto – Mestrado Integrado em Engenharia Informática e Computação – Inteligência Artificial 19/20

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*Abstract*—Este documento de pesquisa eletrónico define todos os aspetos releventes do jogo ZHEDrelacionados com o processamento dos dados modelos desenvolvidos e a sua avaliação e comparação, recorrendo a elementos gráficos apropriados.

Keywords—zhed, reinforcement, learning, puzzle, boardgame, solitary, sarsa, q-learning, artificial, intelligence

# Introdução

O ZHED é um jogo do tipo solitário que consiste em resolver um puzzle. Os puzzles são quadrículas com casas cinzentas, umas numeradas e outras não, e uma casa objetivo, de cor branca. Para completar cada nível, cada casa numerada tem que ser expandida em uma das quatro direções (cima, direita, baixo, esquerda) e sobreposta para alcançar a casa objetivo.

Cada casa expande ***n*** casas na direção escolhida, diminuindo em um para cada casa vazia. Quando uma casa em expansão se sobrepõe a uma casa já preenchida, o número de casa a serem preenchidas na direção da expansão não diminui.

Neste projeto o objetivo é colocar os agentes a aprenderem a resolver este puzzle por **Reinforcement Learning**.

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*a**b* 

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##### References

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