A Review of Real-Time Strategy Game AI

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Abstract
This literature review covers AI techniques used for real-time strategy video games, focusing specifically on StarCraft. It finds that the main areas of current academic research are in tactical and strategic decision-making, plan recognition, and learning, and it outlines the research contributions in each of these areas. The paper then contrasts the use of game AI in academia and industry, finding the academic research heavily focused on creating game-winning agents, while the industry aims to maximise player enjoyment. It finds the industry adoption of academic research is low because it is either in-applicable or too time-consuming and risky to implement in a new game, which highlights an area for potential investigation: bridging the gap between academia and industry. Finally, the areas of spatial reasoning, multi-scale AI, and cooperation are found to require future work, and standardised evaluation methods are proposed to produce comparable results between studies.

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Real-time strategy games involve several attention-grabbing sub-complications that are narrowly associated not only with other areas of AI research but to actual world issues as well. In short, despite continual improvement, each year, still healthy and positive research contributions are required in the field of RTS games and Starcraft to make them more efficient and productive. [2] Robertson, G. and I. Watson, “A review of real-time strategy game AI”. AI Magazine, 2014. 35(4): p. 75-104. This literature review covers AI techniques used for real-time strategy video games, focusing specifically on StarCraft. It finds that the main areas of current academic research are in tactical and strategic decision-making, plan recognition, and learning, and it outlines the research contributions in each of these areas. The paper then contrasts the use of game AI in academia and industry, finding the academic research heavily focused on creating game-winning agents, while the industry aims... CONTINUE READING. Save to Library.