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Exploring the synergies between transfer in reinforcement learning and procedural content generation

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Citation

Müller-Brockhausen, M. F. T. (2025, November 5). *Exploring the synergies between transfer in reinforcement learning and procedural content generation*. Retrieved from <https://hdl.handle.net/1887/4282228>

Version: Publisher's Version

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Propositions

accompanying the dissertation

Exploring the Synergies between Procedural Content Generation and Transfer in Reinforcement Learning

1. The generalization capabilities that can be achieved with transfer in reinforcement learning are disappointing. [Chapter 3, this thesis]
2. Better benchmarks will not solve anything regarding the reproducibility crisis of AI. [Chapter 4, this thesis]
3. Simple heuristics often outperform reinforcement learning and tree search in games. [Chapter 2, this thesis]
4. Building a reinforcement learning environment is a trial-and-error process. [Chapter 2&5, this thesis]
5. The carbon footprint of AI could be reduced if every developer were to use C or Rust instead of Python.
6. In video games, procedural content generation does not automatically guarantee fun and infinite replayability.
7. The perception of the capabilities of AI is overrated because of the rise of large language models.
8. A chain of thought in large language models does not fix the shortcomings large language models suffer from such as derailment (unwanted output).
9. The usage of AI in government decision making that affects people's lives should be forbidden.
10. Publication of unsuccessful experiments should become a norm.
11. Countries should reallocate AI research funds into sustainable energy and public transport.

Matthias Müller-Brockhausen
Leiden, 5th of November, 2025