



Baptiste Debes

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Profile

- My research focuses on value-gradient methods in reinforcement learning: using learned environment models to provide richer training signals than scalar rewards or value targets alone. More broadly, I am interested in decoupled training of neural networks, with the goal of reducing the memory footprint of learning and making training less dependent on end-to-end backpropagation.



Education

- 2019 – 2022  **Master of Engineering**, Data Science and Engineering
University of Liège
Magna Cum Laude. Thesis: The Lottery Ticket Hypothesis and Value-Based Deep Reinforcement Learning.
Thesis: The Lottery Ticket Hypothesis and Value-Based Deep Reinforcement Learning.
- 2020 – 2021  **Exchange semester**, Electrical and Electronic Engineering
EPFL, Lausanne, Switzerland
Master's exchange semester.
- 2016 – 2019  **Bachelor of Computer Science and Electrical Engineering**
University of Liège


Research Experience

- 2022 – present  **Ph.D. student**, PSI, KU Leuven, Leuven, Belgium
Supervised by Prof. Tinne Tuytelaars.

Research Publications

- B. Debes** and T. Tuytelaars, “Distributional value gradients for stochastic environments,” in *International Conference on Learning Representations*, 2026.  DOI: 10.48550/arXiv.2601.20071
- B. Debes** and T. Tuytelaars, “Multivariate distributional reinforcement learning using sliced divergences,” in *International Conference on Machine Learning*, 2026.  DOI: 10.48550/arXiv.2605.31222

Awards and Achievements

- 2022  **TOYOTA MOTOR EUROPE Award**, University of Liège
Award for Master's thesis.