Max Weltevrede

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⬡ MWeltevrede   ⚷ Max Weltevrede

Employment History

2021 · **Decision Intelligence Engineer** White Space Solutions
Worked on designing and building machine learning solutions for real-world planning and scheduling problems.

Education

2022 – · **Ph.D. Researcher** Sequential Decision Making, Delft University of Technology
Supervisors: J. W. Böhmer and M. T. J. Spaan
Working on generalisation in reinforcement learning. In particular, how exploration and distillation affect generalisation to new situations, and how generalisation can be improved in the offline setting.
Expected graduation: Jun 2026

2018 – 2020 · **M.Sc. Computer Science** Delft University of Technology.
Thesis title: *Planning for Money Laundering Investigations.*

2014 – 2016 · **M.Sc. Theoretical Physics** University of Amsterdam.
Thesis title: *Two Dimensional Gravity and Sine-Gorden Theories.*

2011 – 2014 · **B.Sc. Physics** University of Groningen.

· **Honours College Bachelor** University of Groningen.

Research Publications

○ **How Ensembles of Distilled Policies Improve Generalisation in Reinforcement Learning**
Max Weltevrede, Moritz A. Zanger, Matthijs T.J. Spaan, and Wendelin Böhmer
Preprint. Under Review, May 2025

○ **Universal Value-Function Uncertainties**
Moritz A. Zanger, Max Weltevrede, Yaniv Oren, Pascal R. Van der Vaart, Caroline Horsch, Wendelin Böhmer and Matthijs T.J. Spaan
Preprint. Under Review, May 2025

○ **Exploration Implies Data Augmentation: Reachability and Generalisation in Contextual MDPs**
Max Weltevrede, Caroline Horsch, Matthijs T.J. Spaan, and Wendelin Böhmer
Preprint. Under Review, Feb 2025

○ **Explore-Go: Leveraging Exploration for Generalisation in Deep Reinforcement Learning**
Max Weltevrede, Felix Kaubek, Matthijs T.J. Spaan, and Wendelin Böhmer
Seventeenth European Workshop on Reinforcement Learning (EWRL), Sep 2024

- **The Role of Diverse Replay for Generalisation in Reinforcement Learning**
  Max Weltevrede, Matthijs T.J. Spaan, and Wendelin Böhmer
  Sixteenth European Workshop on Reinforcement Learning (EWRL), Aug 2023

Teaching

2023-2024
- **Master Thesis,** Felix Kaubek
  Investigation into the Effect of Replay Buffer Diversity on Generalizability
- **Intelligent Decision Making Project,** TU Delft, CS4210-B
  Supervised a group of five master students on a research project.
- **Research Project,** TU Delft, CSE3000
  Supervised a group of five bachelor students on a research project.
- **Deep Reinforcement Learning,** TU Delft, CS4400
  Supervised lab sessions and helped grading homework.

2022-2023
- **Deep Reinforcement Learning,** TU Delft, CS4400

Skills

Languages
- Strong reading, writing and speaking competencies for English and Dutch.

Coding
- Python, PyTorch, Git, LaTeX, C, C++, Java

Misc.
- Academic research, teaching

References

Available on Request