

Tristan Tomilin

PhD Candidate

A passionate AI researcher with a strong background in engineering. Driven to improve the state of the art in Reinforcement Learning focusing on simulation environments and Game AI.



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WORK EXPERIENCE

PhD Researcher

Technical University of Eindhoven

11/2021 - Present

Eindhoven, The Netherlands

Achievements/Tasks

- Created a 3D generalization benchmark with difficulty levels on top of the ViZDoom platform based on an FPS game with baseline evaluations using the Tianshou RL library
- Compared domain adaptation abilities of APPO between visual and environment entity modifications using the Sample-Factory RL library
- Worked on combining pixel-based offline RL with image transformers and data augmentation in continuous control environments from the DeepMind Control Suite
- Designed a continual RL benchmark on top of ViZDoom with baseline evaluations of popular CL methods

Developer / Machine Learning Engineer

Awaves B.V.

04/2021 - 11/2021

Enschede, The Netherlands

Achievements/Tasks

- Worked on creating a contextual music recommendation engine

Data Scientist

OpenML

02/2021 - 04/2021

Eindhoven, The Netherlands

Achievements/Tasks

- Refined the quality and integrity of existing datasets
- Discovered, preprocessed, and imported new datasets to the OpenML machine learning platform

EDUCATION

PhD in Deep Reinforcement Learning

Eindhoven University of Technology

11/2021 - Present

MSc in Data Science in Engineering

Eindhoven University of Technology

09/2019 - 08/2021

GPA: 8.12/10.00

Thesis

- GVizDoom:** A Benchmark for Generalization of FPS Games in Deep Reinforcement Learning (Grade: 9/10)

BSc in Information Technology, Informatics

Tallinn University of Technology

09/2013 - 06/2016

GPA: 4.45/5.00

Thesis

- Digital Identity usage notification platform (Grade: 5/5)

SKILLS

Python

NumPy

Pandas

Matplotlib

Scikit-Learn

PyTorch

Tensorflow

Keras

OpenCV

OpenAI Gym

ViZDoom

MuJoCo

Baselines

RLlib

Docker

Conda

Slurm

PPO

Rainbow

TD3

SAC

IMPALA

PUBLICATIONS

Tomilin, T., Dai, T., Fang, M. and Pechenizkiy, M., 2022, August. LevDoom: A Benchmark for Generalization on Level Difficulty in Reinforcement Learning. In 2022 IEEE Conference on Games (CoG) (pp. 72-79). [↗](#)

LANGUAGES

Estonian

Native or Bilingual Proficiency

English

Native or Bilingual Proficiency

Dutch

Professional Working Proficiency

Russian

Elementary Proficiency

German

Elementary Proficiency

RESEARCH INTERESTS

Generalization in RL

Continual RL

Competitive and Cooperative Multi-agent RL

Imitation Learning

Curriculum Learning

Hierarchical RL

Game AI

Modular RL