

André Luís Fialho Jesus

🇵🇹 Portuguese ✉ andre.jesus@uni-konstanz.de 🔗 Personal website

Work Experience

2025/02 – present **University of Konstanz**
Konstanz, Germany *PhD Candidate at Centre for the Advanced Study of Collective Behaviour*
Working on imitation learning for swarm robots. Supervisors: Prof. Jonas Kuckling

Technology Innovation Institute 🔗

2022/12 – 2024/04 *Researcher at ARRC*
Abu Dhabi,
United Arab Emirates Roles and functions: "Data management, robot software engineering, reinforcement learning, gaussian processes, track operations, technical interviews".
Working in Las Vegas (Jan. 2023) as part of the TII EuroRacing team 🔗 and for the inaugural A2RL race 🔗 in Abu Dhabi (April 2024). Spent 6 weeks in North Italy in the testing campaign of a prototype hardware platform. Advisors: Dr. Danilo Caporale & Dr. Giovanni Pau.

2022/04 – 2022/11 *Research Intern at ARRC*
Abu Dhabi,
United Arab Emirates Implementing a pipeline with Assetto Corsa (sim racing) for the behavior planner testing. Working in the USA for two months as part of the TII EuroRacing team 🔗 which achieved 3rd place in Texas (Nov. 2022). Performing a quantitative comparison of different motion forecasting approaches. Advisor: Dr. Danilo Caporale.

2020/02 – 2022/01 **Vrije Universiteit Amsterdam** 🔗
Amsterdam, Netherlands *Student Teaching Assistant*
Software Design (Bachelor CS, 2020) with Prof. Ivano Malavolta;
Project Embodied AI (Bachelor AI, 2020) with Prof. Eliseo Ferrante;
Evolutionary Computing (Master AI, 2021) with Prof. A. E. Eiben;
Intelligent Systems (Bachelor AI, 2021) with Prof. Stefan Schlobach;
Learning Machines (Master AI, 2022) with Prof. Anil Yaman.

2019/03 – 2019/07 **Novabase SPGS** 🔗
Lisbon, Portugal *Internship Trainee*
Software testing the backend and frontend functionalities of an in-house fintech product. Externalizing and extending the internal unit tests orchestration library to facilitate the integration of new features. Technologies used: Java, SQL, JSON, and XML.

Education

2019/09 – 2022/02 **MSc Artificial Intelligence**
Amsterdam, Netherlands *Vrije Universiteit Amsterdam (VU)* 🔗
Advisor: Prof. Eliseo Ferrante; Final grade: 8.2 out of 10; Thesis title: "System identification of vehicle dynamics for Autonomous Racing".

2016/09 – 2019/07 **BSc Computer Science**
Almada, Portugal *FCT - UNL* 🔗
Advisor: Prof. Miguel P. Monteiro; Final project: conducted in an internship at Novabase 🔗.

Selected Publications (1/3)

Jesus, A., Zito, C., Tortorici, C., Roura, E., & Masi, G.D. (2022). Underwater Object Classification and Detection: first results and open challenges. OCEANS 2022 - Chennai, 1-6.

Projects

- 2021/06 – 2022/02 **Master thesis collaborator - TII EuroRacing** [↗](#)
Part of the team (remotely) that achieved 2nd place in the inaugural Indy Autonomous Challenge [↗](#) in Indianapolis (Oct. 2021). Developing my Master's thesis in optimization and data-driven solutions for vehicle dynamics modeling.
- 2020/09 – 2021/05 **Mini Master Project AI - VU Amsterdam**
Computer vision project in collaboration with a research institute. Analysed and compared state-of-art deep learning approaches in Underwater Object Detection - [GitHub link](#) [↗](#) . Adapted an available code base and deployed a multi-GPU training pipeline in the VU cluster. Our work was accepted at the OCEANS22 conference.
- 2021/01 **2020 ML Reproducibility Challenge - UvA Amsterdam**
Reimplementing, validating, and extending a Computer Vision paper as part of the 2020 ML Reproducibility Challenge [↗](#) . The paper submission can be found at <https://openreview.net/> [↗](#) .

Skills

Programming and scripting related

Python, C++, SQL, Bash scripting, Unity (C#), C Cuda, ROS2, AWS, Conan (Jfrog), Docker

Machine Learning related

PyTorch, Pandas, Numpy, Libtorch (C++), Backproptools (C++)

Team work

Developed through collaborative work in academia and participation in dynamic teams in the industry

Service and other experiences

Virtual meeting moderator at OCEANS 2022

[↗](#)

Classification and pattern recognition session

VU Open Masters Day - 2021 (Online due to COVID-19)

Student representative for the MSc in Artificial Intelligence

Languages

Portuguese

Native language

English

Language of postgraduate studies

Spanish & Italian

Limited proficiency

References

Eliseo Ferrante, *Assistant Professor*, Vrije Universiteit Amsterdam
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Danilo Caporale, *Senior Director*, Technology Innovation Institute
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