Ahmed Yesuf **Nurye**

PH.D. CANDIDATE

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"Be the change you want to see in the world."

Research Interests

Human Interactive Robot Learning, Mathematical Human Modeling, Reinforcement Learning

Education

Vrije Universiteit Amsterdam — *Amsterdam, The Netherlands*

PH.D. IN COMPUTER SCIENCE — *Oct. 2025 – Present*

- Advisors: Prof. Kim Baraka & Prof. Herke van Hoof (UvA).

Warsaw University of Technology — *Warsaw, Poland*

M.SC. IN ROBOTICS AND AUTOMATIC CONTROL — *Oct. 2022 – Oct. 2024*

- Advisor: Prof. dr hab.inż. Elżbieta Jarzębowska.
- Thesis: Mobile Robot Navigation in Dynamic Environments.

Addis Ababa Science and Technology University — *Addis Ababa, Ethiopia*

B.SC. IN ELECTRICAL ENGINEERING — *Oct. 2016 – Sep. 2021*

- B.Sc. Project: Smart Irrigation System Powered by Dual Axis Solar Tracker.

Publications

Google Scholar

† → Equal contribution

CONFERENCE PROCEEDINGS

C1. **Nurye, A. Y.** & Jarzębowska, E. *Deep Reinforcement Learning for Mobile Robot Navigation in Dynamic Environments* in *2025 29th International Conference on Methods and Models in Automation and Robotics (MMAR)* (2025), 83–88.

Experience

Social AI Lab — *Amsterdam, The Netherlands*

PH.D. CANDIDATE — *Oct. 2025 – Present*

- Working on interactive robot learning algorithms from multi-modal human feedback.

Scania Group — *Gdańsk, Poland*

SYSTEMS ENGINEER — *Apr. 2024 – Present*

- Engineering requirements and implementing core BMS algorithms, such as hot-connection management and EU Battery Regulation compliance, to ensure system safety and regulatory conformance.
- Taking part in end-to-end verification & validation of BMS functions to enhance software reliability and accelerate delivery cycles.

Northvolt — *Gdańsk, Poland*

SYSTEMS ENGINEER — *Apr. 2024 – Apr. 2025*

- Did comprehensive verification & validation of battery management system functions, identifying critical issues and ensuring adherence to performance specifications.
- Developed and deployed a Python package for automated code generation using Jinja2 templates to standardize system integration workflows and reduce manual implementation effort.

New Era Research and Development Center — *Addis Ababa, Ethiopia*

RESEARCH INTERN — *Apr. 2021 – Jun. 2021*

- Contributed to a differential-drive mobile robot's mechanical and control design.
- Implemented and evaluated classical path-planning algorithms in simulated and real environments, including bug and line-following methods.

Teaching

Addis Ababa Science and Technology University

2022 **Introduction to Control System (*EEEg4155*)**, Teaching Assistant & Lab Instructor
2021 **Electrical Measurement & Instrumentation (*EEEg3153*)**, Teaching Assistant

Skills

Programming Python, C/C++, MATLAB/Simulink, Octave, Shell Scripting(bash)
Libraries Gymnasium, Genesis, MuJoCo, OpenCV, PyTorch, Scikit-Learn
Other Tools Linux, ROS2, Gazebo, Git/GitHub, Docker, LaTeX
Languages English, Amharic

Tools and Software

gym-turtlebot: a turtlebot4 gymnasium environment *website*
Python | ROS2 | Gazebo Sim *Mar. 2025 – Present*
- A ROS2 and Gazebo based simulation environment for TurtleBot4 that provides a minimal setup for quickly prototyping DRL agents for navigation using gymnasium API.

MBD Simulink *GitHub*
MATLAB | Simulink *Dec. 2024 – Present*
- A productivity tool that automates block insertion, naming, and connection tasks in Simulink to streamline model-based design workflows.

pdfx *PyPi | GitHub*
Python *May. 2025 – Present*
- Command-line tool for pdf inspection and operations including merge, split, extract, remove, encrypt, decrypt, and conversion to pdf.

LaTeX-SoP: a modular statement of purpose template *GitHub*
LaTeX *Apr. 2025*
- A modular statement of purpose template for graduate school applications.

Leadership and Outreach

2019 **Charity Affairs Coordinator**, Led the charity initiatives of the AASTU Students' Union, organizing fundraising and outreach efforts. *AASTU*

Awards and Honors

2024 **Summa Cum Laude [✹]**, Graduated with highest honors, M.Sc. in Robotics & Automatic Control. *WUT*
2024 **Mr Tomaka's Scholarship**, Awarded for academic excellence at Warsaw University of Technology. *WUT*
2022 **Banach Scholarship**, Fully funded 2nd-cycle studies in Poland, covering tuition and living expenses. *NAWA*
2021 **Summa Cum Laude [✹]**, Graduated with highest honors, B.Sc. in Electrical Engineering. *AASTU*

Professional Memberships

2024– **Black in AI**, Member
2023– **IEEE Robotics and Automation Society**, Member
2023– **Institute of Electrical and Electronics Engineers (IEEE)**, Graduate student member