

Jonne van Haastregt

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PROFESSIONAL EXPERIENCE

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| Nov 2023 – present
Stockholm, Sweden | Research Engineer , <i>Division of Robotics, Perception & Learning @ KTH</i> <ul style="list-style-type: none">Designed and built a system for robot actuation driven by natural language.Deployed cutting-edge algorithms onto hardware (e.g. diffusion policies).Created a digital twin with teleoperation and imitation learning in VR.<i>Relevant hard skills</i>: ROS, Unity/C#, Python, C++, Git, Linux |
| Jan 2023 – Jul 2023
Södertälje, Sweden | Thesis Intern Autonomous Driving , <i>Scania AB</i> <ul style="list-style-type: none">Increased possible driving speeds up to 20 km/h compared to available occlusion-aware methods while able to guarantee collision-free trajectories.<i>Relevant hard skills</i>: C++, Python, Git, Linux, Docker |
| Dec 2022 – Mar 2023
Stockholm, Sweden | Research Intern NASA Astrobbee project , <i>KTH Royal Institute of Technology</i> <ul style="list-style-type: none">Programmed and integrated a nonlinear model predictive controller (MPC) for the astrobbee robots. Result on GitHub 🔗 Nasa Astrobbee Project 🔗<i>Relevant IT Skills</i>: ROS, C++, Python, Git, Linux |
| Jan 2021 – Aug 2021
Enschede, Netherlands | Faculty Council Member , <i>University of Twente, Faculty of Engineering Technology</i> <ul style="list-style-type: none">Advised the Faculty Board on issues regarding policy, budgeting, introduction of new research or educational programmes, and more. |
| Feb 2020 – Feb 2021
Enschede, Netherlands | Chairman W.S.G. Isaac Newton , <i>Study Association @ University of Twente</i> <ul style="list-style-type: none">Enabled 200 active members to organize social, educational, and career activities for our 1800 members.Managed the unexpected covid crisis.Cultivated a flexible and adaptable can-do mindset. Gained organizational experience. Association Website 🔗 |

EDUCATION

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| Sep 2021 – Jul 2023
Stockholm, Sweden | Master in Systems, Control & Robotics , <i>KTH Royal Institute of Technology</i> <ul style="list-style-type: none">Achieved excellent grades (ToR attached).<i>Relevant coursework</i>: Modelling of Dynamical Systems (B), Model Predictive Control (A), Applied Estimation (B), Advanced Machine Learning (A)<i>Relevant hard skills</i>: ROS, Python, MatLab & Simulink, Git, Linux, Docker |
| Sep 2018 – Jul 2021
Enschede, Netherlands | Bachelor in Mechanical Engineering , <i>University of Twente</i> <ul style="list-style-type: none"><i>Graduation project</i>: Multi-sensor disturbance feedforward control for active vibration isolation systems using Kalman filtering.Took on many leading roles in projects from the industry.<i>Relevant courses</i>: Flexible Multibody Dynamics (8.5/10), Embedded Systems (9.5/10), Statistics (8.5/10), Linear Algebra (9.5/10) |

PUBLICATIONS

Highway-Driving with Safe Velocity Bounds on Occluded Traffic,

Accepted to *IEEE International Conference on Robotics and Automation (ICRA) 2024* [🔗](#)

Truls Nyberg*, Jonne van Haastregt*, Jana Tumova (*authors contributed equally).

A Robotic Skill Learning System Built upon Diffusion Policies and Foundation Models,

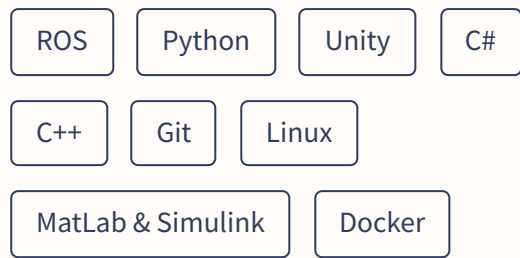
Under Review *IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN) 2024* [🔗](#)

Nils Ingelhart*, Jesper Munkeby*, Jonne van Haastregt*, Anastasia Varava, Michael C. Welle, Danica Kragic (*authors contributed equally). Video on the website [🔗](#).

SOFT SKILLS

Desire to learn | Taking initiative | Teamwork
Adaptability | Problem Solving | Curious
Effective Communication | Project Management
Enthusiasm | Leadership | Fast Learner

IT SKILLS



LANGUAGES

Dutch (Native) | **English** (Proficient) | **Swedish** (Medium, Learning) | **German** (Basic) | **Spanish** (Basic)

TECHNICAL BACKGROUND

- Autonomous Systems
- Computer Vision
- Signal Processing
- SLAM
- Reachability Analysis
- Motion Planning
- Machine Learning
- Dynamical Systems
- Algorithms
- Statistics and Estimation
- Decision Making
- Perception
- Mechatronics
- Embedded Systems