Mike Timmerman

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EXPERIENCE

Graduate Researcher Sept. 2024 – Present

Stanford Space Rendezvous Lab Stanford, USA

- Researcher on the **StarFOX experiment for NASA Starling**, demonstrating technologies for spacecraft swarms.
- Developing space situational awareness algorithms in C++ scheduled for first on-orbit demonstration this Spring.

Control Engineer July 2024 – Sept. 2024

GMV Space Systems Lisbon, PORT

- Led a research project on a **novel descent guidance algorithm** to advance reusable launch vehicle development.
- Designed verification campaigns using in-house flight simulation software to validate control strategies.

Graduate Researcher Sept. 2023 – June 2024

Stanford Intelligent Systems Lab Stanford, USA

- Developed **decision-making algorithms** which improve the safety and robustness of autonomous vehicles.
- Designed experiments with real-world datasets, leading to an original research paper on decision-making.

Bachelor Graduation Project Apr. 2023 – June 2023

Delft University of Technology Delft, NL

- **Led the development** and validation of the **control and navigation software** for an autonomous inspection drone
- Continuously documented progress over a 10 week timeline, working full-time in a team of 10 students

Control Engineer Aug. 2021 – June 2023

Delft Aerospace Rocket Engineering Delft, NL

- Started and **managed a team to develop autonomous landing capabilities** of a small-scale launch vehicle
- Created a simulation environment and developed the control software, demonstrating an autonomous landing

EDUCATION

Stanford University Sep. 2023 – Present

Master of Science in Aerospace Engineering Stanford, USA

- **GPA: 4.1/4.0**
- **Coursework**: State Estimation for Robotic Perception, Machine Learning, Convex Optimization, Principles of Robot Autonomy, Optimal and Learning-based Control, Programming in C++, Decision-making under Uncertainty

Delft University of Technology Sep. 2020 – June 2023

Bachelor of Science in Aerospace Engineering Delft, NL

- **Grade**: **9.0/10** (top 1.0%, Cum Laude)
- **Coursework**: Aerospace Flight Dynamics and Simulation with Flight Test, Aerospace Systems and Control, Simulation Verification and Validation, Systems Engineering and Aerospace Design, Model Predictive Control
- **Minor Abroad**: Robotics Systems and Control at École Polytechnique Fédérale de Lausanne (EPFL)

AWARDS

BAEF Fellowship Feb. 2023

Fellowship for initial two-year graduate studies in the US BE

KHMW Young Talent Encouragement Award Sep. 2021

Award for the highest GPA for first year students in the field of Aerospace Engineering in the Netherlands NL

PUBLICATIONS

IEEE Robotics and Automation Letters 22 Jul 2024

- M. Arief, M. Timmerman, et.al., "Importance Sampling-Guided Meta-Training for Intelligent Agents in Highly Interactive Environments," in IEEE Robotics and Automation Letters, vol. 10, no. 2, pp. 1098-1105, Feb. 2025.

4th Symposium on Space Educational Activities 27-29 April 2022

Paper presentation Vortex Building, Barcelona

- Michalek, O. [et al.]. Findings from the ESA Education Fly a Rocket Campaign - Sensor Experiments Team. A: "4th Symposium on Space Educational Activities". Universitat Politècnica de Catalunya, 2022