

# Marco Schouten

*PhD student*

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## Research Interest

Computer Vision, Machine Learning, Generative AI

## Education

- 2023–2026 **Ph.D. in Computer Science**, *DTU Technical University of Denmark*, DK  
Co-advised: Dim P. Papadopoulos and Serge Belongie
- 2020–2022 **M.Sc. in Machine Learning**, *KTH Royal Institute of Technology*, SE  
GPA: 4.85 / 5.00
- Fall 2021 **Exchange semester**, *Delft University of Technology*, NL
- 2017–2020 **B.Sc. in Computer Engineering**, *University of Genoa*, IT  
Final Grade: 109 / 110 (Rank: 4<sup>th</sup> of 150)

## Experience

- 11/2023–  
11/2026 **PhD student**, *DTU and Pioneer Centre for AI*, Copenhagen, DK  
Conducted research in computer vision, focusing on image generation and editing.
- 03/2023–  
10/2023 **Research Intern**, *Aptiv*, Düsseldorf, DE  
(7 months)
  - Supervised by Dr. Pascal Colling.
  - Researched HD map generation for autonomous driving. Curated a dataset from LiDAR and Radar data and implemented preprocessing pipelines. Conducted a literature review on map learning and trained prototype models.
- 02/2022–  
08/2022 **Master Thesis**, *Swedish Maritime Robotics Centre (KTH)*, Stockholm, SE  
(6 months)
  - Supervised by Prof. John Folkesson.
  - Developed a SLAM-based pose estimation algorithm for underwater vehicles using sonar imagery. Formulated as a nonlinear least-squares problem and solved with Ceres Solver.

## Skills

Programming Python, PyTorch, Git, Ceres-Solver, LaTeX, Bash  
Cluster High-performance-computing (HPC) with IBM LSF  
Languages English (proficient), Italian (native)

## Awards

- 2025 Selected, International Computer Vision Summer School (ICVSS)  
2022 Selected, mentee at NovaTalent  
2021 Selected, mentee at LeadTheFuture

- 2020 Hattrick Award for KTH's AI course, top 20% of 427 students.  
2018 Scholarship at University of Genoa for 3 years.

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## Talks

- Oct 2024 Computer Vision workshop at Pioneer Center for AI, Copenhagen, Denmark

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## Teaching

- Spring 2025 Academic support teacher (SPS), to 1 student with special needs, DTU  
Spring 2025 Teaching Assistant, 02501 Advanced Deep Learning in Computer Vision, DTU  
Fall 2024 Teaching Assistant, 02516 Introduction to Deep Learning in Computer Vision, DTU  
Fall 2024 Academic support teacher (SPS), to 2 students with special needs, DTU

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## Publications

- [1] **M. Schouten**, M. O. Kaya, S. Belongie, and D. P. Papadopoulos. "Instruction-Guided Precise Image Editing Using Multimodal LLMs." In (*CVPR-W*), 2025. [PDF link]
- [2] **M. Schouten**, M. O. Kaya, S. Belongie, and D. P. Papadopoulos. "POEM: Precise Object-level Editing via MLLM Control." In (*SCIA*), 2025. [arXiv link]
- [3] L. Cadermatori, G. Galatà, C. L. Monaco, M. Maratea, M. Mochi, and **M. Schouten**. "An ASP-based Approach to Master Surgical Scheduling." In (*CILC*), 2022. [PDF link]

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## Interests

Drawing and painting  
Tennis