

LUDVIG DILLÉN

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🌐 [ludvigdillen](https://ludvigdillen.github.io)

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EDUCATION

Ph.D. Student in Applied Mathematics | Lund University

2023/11 – present

- **Focus:** Localization and Mapping | Computer Vision and Machine Learning
- **PI:** Viktor Larsson; **Co-PI:** Magnus Oskarsson
- **Coursework:** 71/90 ECTS – computer vision, machine learning, mathematics, and WASP graduate courses
- Funded by ELLIIT; affiliated with WASP

Industrial Engineering and Management | Linköping University (GPA: 4.92 / 5.00) 2018/08 – 2023/10

- **Bachelor profile:** Electrical Engineering – Bachelor Thesis [↗](#)
- **École Polytechnique Fédérale de Lausanne** – *Exchange semester* 2021/08 – 2022/02
- **Master profile:** Computer Vision and Signal Analysis – Master Thesis [↗](#)

PAPERS

Edge Prediction for Roof Wireframe Reconstruction with Transformers [↗](#) | arXiv Preprint 2026

- Co-authored a transformer-based approach for predicting roof wireframe edges from images; participated in the S23DR 2026 challenge at CVPR, placing second. [🌐 Code](#)

Active Exploration for Sparse Visual Localization [↗](#) | CVPR Findings 2026

- Co-authored work on active viewpoint exploration for sparse visual localization. [🌐 Code](#)

Sparse-View Localization via Online Neural 3D Regression [↗](#) | CVPR 2026

- First-author paper on online neural 3D regression for sparse-view camera localization. [🌐 Code](#)

FACT: Multinomial Misalignment Classification for Point Cloud Registration [↗](#) | SCIA 2025

- First-author paper on classifying point cloud registration misalignment. [🌐 Code](#)

WORK EXPERIENCE

Lund University

Lund, Sweden

Teaching Assistant & Thesis Co-Supervisor

2024 – present

- Mathematical Modelling; Computer Vision; Machine Learning; and Calculus in One Variable B1.
- Co-supervised master's theses including LightGlu3D: Feature Matching between 2D and 3D; 4D Sports Scene Reconstruction; Panoramic Skyline Matching for Geo-Localization; Neural Motion Averaging for Visual Localization; Robust Visual Localization through Covisibility-Guided Matching; Infrared-to-Visible Light Ratio Estimation; Ball Tracking in Association Football; with 1 more ongoing.

Linköping University

Linköping, Sweden

Amanuensis at the Computer Vision Laboratory (CVL)

2022/08 – 2023/06

- Taught signal and image processing; Participated in the academic-industry collaboration Smart Twin by Visual Sweden doing SLAM research; Joined lab activities such as seminars, meetings, and research presentations.

Taught Courses Across Several Departments

2019 – 2023

- Linear Systems; Electronics Engineering – Bachelor Project; Digital Image Processing; Signals and Systems, and Transform Theory; Economic Analysis: Economic Theory; Mathematical Foundation Course; Linear Algebra; with more.

Autonomous Vehicle Feature Engineer | Qualcomm (previously Arriver) [↗](#)

2021/06 – 2022/08

- **First summer:** Visualizing and creating a toolbox for CNN statistics; **Second summer:** Trained CNNs for semantic segmentation for novel classes, which have been integrated into the product.

Selected Technologies: Python, PyTorch, Wandb, Git, Codex, Claude Code, L^AT_EX, Slurm