

Mats Nilsson

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WORK EXPERIENCE

Software Developer

MN Development

Jan 2025 — current

Gothenburg, Sweden

- Consultant assignment included software development in C++ for autonomous trucks.

Software Developer

Zenseact / Zenuity

March 2020 — Jan 2025

Gothenburg, Sweden

- Maintained, optimized and uplifted Bazel in a primarily C++ and Python monorepo.
- Maintained Bazel implementations/wrappers for GCC, clang, clang-tidy and Perforce QAC.
- Considered as one of few Bazel experts within the company, provided support, best practices and guidelines for others.
- Created core features and tools to simplify safety compliance using Bazel aspects.
- Was part of a senior C++ team responsible for strategy, creating and maintaining core libraries, guidelines and best practices for more than 500 developers.
- Was also previously part of a team that developed an image processing component for an autonomous vehicle in C++ and CUDA using classical methods for detecting general objects on or near the road. The component was part of a software stack for autonomous vehicles and therefore had strict requirements on performance, runtime and standard compliance.

Software Developer

SICK

Aug 2018 — Mar 2020

Linköping, Sweden

- Full stack developer for a 3D line camera called TriSpector. Work included everything from fixing things in the low level Linux kernel domain, developing fast machine vision algorithms in C++ and making them easy to use in a graphical user interface written in Java. Partly responsible for maintaining DevOps features like build servers, Docker images, SVN to Git migration.

Course assistant

Dept. of Computer and Information Science, Linköping University

Aug 2016 — Jan 2017

Linköping, Sweden

- Teaching assistant in an algorithms and data structures course in C++ for third year university students. I held classroom lessons, computer labs and graded assignments.

EDUCATION

Master Thesis

M.Sc. Applied Physics and Electrical Engineering

SAAB Dynamics, Linköping, Sweden

Aug 2013 — Jun 2018

- Developed a building reconstruction Markov chain Monte Carlo-algorithm written in C++ with OpenCV for improved geometric accuracy of buildings in digital height models, <https://urn.kb.se/resolve?urn=urn:nbn:se:liu:diva-148886>.

Auckland University of Technology

Study Abroad Semester

Auckland, New Zealand

Feb 2017 — Jun 2017

- Courses included real time systems, data mining and machine learning, artificial intelligence and natural language processing.

Linköping University

M.Sc. Applied Physics and Electrical Engineering

Linköping, Sweden

Aug 2013 — Jun 2018

- The courses provided depth and breadth in mathematics, physics and electrical engineering while doing advanced problem solving alone and in teams. Specialized with a master in signal and image processing.

SKILLS

- **Programming Languages:** C++, Python, Starlark, CUDA, Bash
- **Technologies:** Bazel, Git, CMake, Linux, Docker