

SIMON HALVDANSSON

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EDUCATION

NTNU Norwegian University of Science and Technology

Aug 2021 - Jun 2025

Ph.D. in Mathematics

Thesis: Extensions of Quantum Harmonic Analysis and Applications to Time-Frequency Analysis

Lund University

Aug 2016 - Jun 2021

M.Sc. and B.Sc. in Mathematics

GPA: 4.0/4.0

Master thesis: Existence and Approximations of Optimal Wavelets

Bachelor thesis: Computations with the 2D Coulomb Gas

EXPERIENCE

SINTEF Energy Research

May 2025 - Present

Research Scientist

Trondheim, Norway

- Developed a system for LLM-grading of database events with structured outputs, ollama, and the Gemini API
- Applied model predictive control and machine learning for efficient control of an integrated energy system
- Project development, writing grant applications

NTNU Norwegian University of Science and Technology

Aug 2021 - May 2025

PhD Candidate

Trondheim, Norway

- Authored 8 research articles in the fields of time-frequency analysis, functional analysis and operator theory
- Presented my work to international audiences at 10+ conferences, workshops and seminars
- Held exercise sessions, wrote problems and solutions, mentored students and graded exams (2 courses per year)
- Refereed papers for Journal of Fourier Analysis and Applications, Journal of Mathematical Physics, SampTA 2025, Journal of Functional Analysis and Journal of Geometric Analysis

RSA Ductor

Summer 2017

Web Developer Consultant

Stockholm, Sweden

- Developed a web application to support internal business processes using AngularJS

DeLaval

Summer 2015 and 2016

Web Developer

Stockholm, Sweden

- Contributed to design and development of mobile web application and development of Java backend

PROJECTS

Android apps

- Developed several Android applications with a combined total of 100 000+ downloads and €2500+ revenue
- Maintaining the most popular Hacker News client for Android, Harmonic, 6 000+ DAU, 800+ GitHub stars

Technical blog

- Writing a blog about technical problems in machine learning and time-frequency analysis which interest me

TECHNICAL SKILLS

Languages Python, Java, JavaScript, C++, C#, MATLAB

Libraries PyTorch, NumPy, SciPy, AndroidX, LTFAT, Matplotlib, Pyomo, SCIP, ollama