

SIMON HALVDANSSON

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EDUCATION

NTNU Norwegian University of Science and Technology Ph.D. in Mathematics <i>Thesis:</i> Extensions of Quantum Harmonic Analysis and Applications to Time-Frequency Analysis	Aug 2021 - Jun 2025
Lund University M.Sc. and B.Sc. in Mathematics <i>Master thesis:</i> Existence and Approximations of Optimal Wavelets <i>Bachelor thesis:</i> Computations with the 2D Coulomb Gas	Aug 2016 - Jun 2021 GPA: 4.0/4.0

EXPERIENCE

SINTEF Energy Research <i>Research Scientist</i>	May 2025 - Present <i>Trondheim, Norway</i>
· 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 <i>PhD Candidate</i>	Aug 2021 - May 2025 <i>Trondheim, Norway</i>
· 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 Doctor <i>Web Developer Consultant</i>	Summer 2017 <i>Stockholm, Sweden</i>
· Developed a web application to support internal business processes using AngularJS	
DeLaval <i>Web Developer</i>	Summer 2015 and 2016 <i>Stockholm, Sweden</i>
· 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