

ANDRÉ STORHAUG

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EDUCATION

Philosophiae Doctor (PhD) in Computer Science

Norwegian University of Science and Technology (NTNU)

2022 - present
Trondheim, Norway

Advisors: Prof. Jingyue Li, Prof. Zhirong Yang, & Assoc. Prof. Mariusz Nowostawski

Focus: Large language models, Code generation, Security

Master of Science in Engineering (MSE) in Computer Science

Norwegian University of Science and Technology (NTNU)

2020 - 2022
Trondheim, Norway

Thesis: "Secure Smart Contract Code Synthesis with Transformer Models"

Advisor: Prof. Jingyue Li

Bachelor of Engineering (BE) in Computer Science

Norwegian University of Science and Technology (NTNU)

2017 - 2020
Ålesund, Norway

Thesis: "Voxelizer: an Open Source Voxelization Engine"

Advisor: Prof. Ricardo da Silva Torres

EXPERIENCE

Data Scientist

Microsoft

Mar 2026 - present
Oslo, Norway

Large-scale LLM-powered inference systems that enable smarter and more helpful Microsoft 365 Copilot experiences.

PhD Candidate

Norwegian University of Science and Technology (NTNU)

Aug 2022 - Aug 2025
Trondheim, Norway

Research focus on automatic code generation using large language models (LLMs) to produce high-quality, maintainable, and secure code.

- Developed novel "vulnerability-constrained decoding" method for generating more secure code with LLMs.
- Efficient large-scale data scraping, cleaning, labeling, and analysis.
- Distributed training of multi-billion parameter models using advanced parallelism strategies on HPC infrastructure.
- Researched agentic systems for automated code understanding and security analysis.

Visiting Student

CSIRO's Data61

Sep 2024 - Feb 2025
Sydney, New South Wales, Australia

Research visit at CSIRO's Data61, the data and digital specialist arm of Australia's national science agency. Researched agent-based software security patch discovery.

Research Assistant

Norwegian University of Science and Technology (NTNU)

Oct 2017 - Jul 2022
Ålesund, Norway

Part of the [KQMATH](#) Moodle team at NTNU, Department of ICT and Natural Sciences, under the lead of Prof. Hans Georg Schaathun. Involved in the development of several [plugins](#) for the e-learning management system Moodle:

- [ShortMath](#): A Moodle question type for writing beautiful mathematical expressions in WYSIWYG. Used by 300 sites.
- [QTracker](#): Issue tracking system for Moodle questions. Used by 40+ sites.
- [CAPQuiz](#): Computer Adaptive Practice quiz system. Used by 60+ sites.
- [JazzQuiz](#): Lets a teacher run a pre-planned quiz, but with the power of improvisation. Used by 500+ sites.

Main responsible for ShortMath and QTracker, as well as the [TeX2Max](#) transpilation library for converting LaTeX math to Maxima code. Also implemented continuous integration for all development projects.

Learning Assistant

Norwegian University of Science and Technology (NTNU)

Sep 2018 - Jun 2022

Trondheim, Norway

Part of small team at NTNU Section for learning support (earlier Centre for Teaching and Learning) providing several critical teaching related services for the 8,000+ employees and 43,000+ students at NTNU:

- Support for most of the digital services and tools offered by NTNU, like Blackboard, Urkund, KASPER, Zoom, Panopto, and Microsoft Office 365.
- Create and hold physical and digital courses and training sessions for employees and students.
- Create and maintain digital training resources such as wikis and videos.

PUBLICATIONS

Journal articles

- [1] T. Hu, J. Li, B. Li, and A. Storhaug, "Why smart contracts reported as vulnerable were not exploited?" *IEEE Transactions on Dependable and Secure Computing*, vol. 22, no. 3, pp. 2579–2596, 2025. doi: [10.1109/TDSC.2024.3520554](https://doi.org/10.1109/TDSC.2024.3520554)

Peer-reviewed conference publications

- [2] A. Storhaug, J. Li, and T. Hu, "Efficient avoidance of vulnerabilities in auto-completed smart contract code using vulnerability-constrained decoding," 2023 IEEE 34th International Symposium on Software Reliability Engineering (ISSRE), Florence, Italy, 2023, pp. 683-693. doi: [10.1109/ISSRE59848.2023.00035](https://doi.org/10.1109/ISSRE59848.2023.00035)
- [3] J. Li, P. H. Meland, J. S. Notland, A. Storhaug, and J. H. Tysse, "Evaluating the impact of ChatGPT on exercises of a software security course," 2023 ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM), New Orleans, LA, USA, 2023, pp. 1-6. doi: [10.1109/ESEM56168.2023.10304857](https://doi.org/10.1109/ESEM56168.2023.10304857)
- [4] J. Li, and A. Storhaug, "Reproducible, Explainable, and Effective Evaluations of Agentic AI for Software Engineering," 34th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (FSE Companion '26), Montreal, QC, Canada, 2026. doi: [10.1145/3803437.3805548](https://doi.org/10.1145/3803437.3805548)

Preprints, technical reports, papers under review

- [5] A. Storhaug and J. Li, "Favia: Forensic Agent for Vulnerability-fix Identification and Analysis," 2024. doi: [10.48550/arXiv.2602.12500](https://doi.org/10.48550/arXiv.2602.12500)
- [6] A. Storhaug and J. Li, "Parameter-efficient fine-tuning of large language models for unit test generation: An empirical study," 2024. doi: [10.48550/arXiv.2411.02462](https://doi.org/10.48550/arXiv.2411.02462)

Theses

- [7] A. Storhaug, "Secure smart contract code synthesis with transformer models," Master's thesis, NTNU, 2022. doi: [11250/3015521](https://doi.org/10.11250/3015521)
- [8] A. Storhaug, "Voxelizer: an open source voxelization engine," Bachelor's thesis, NTNU, 2020. doi: [11250/2663598](https://doi.org/10.11250/2663598)

ACADEMIC SERVICES

Organizing Committee

- Web Co-Chair, [Foundations of Software Engineering \(FSE\) 2025](#)

Jan 2024 - Jun 2025

Program Committee Member

- [Multi-Agent Systems using Generative Artificial Intelligence for Automated Software Engineering \(MAS-GAIN\) 2025](#) 2025

Reviewer

- [Neurocomputing](#) 2026

Volunteer Work

- Student Volunteer, [Foundations of Software Engineering \(FSE\) 2025](#)

Jun 2025

PROJECTS

- ShiftR**
MacOS menu bar utility that reveals hidden items by shifting overflowed icons, improving usability on notched or small-screen Macs.
apps.apple.com/app/id6740135591
- DeepSpeed Model Memory Calculator**
Tool for calculating theoretical required memory for the various Zero Redundancy Optimizer (ZeRO) configurations.
huggingface.co/spaces/andstor/deepspeed-model-memory-usage
- latex-math-parser**
LaTeX mathematics parser based on PEG parser generator.
github.com/andstor/latex-math-parser

LANGUAGES

Norwegian Bokmål
Native proficiency

Norwegian Nynorsk
Native proficiency

English
Bilingual proficiency

German
Limited working proficiency