SØLVE LANGSETH

AI · Machine Learning · LLM Systems

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Profile

MSc in Bioinformatics and Applied Statistics from NMBU (2026), with an A on my master's thesis completed in collaboration with Simula Research Laboratory. I enjoy building and testing solutions in Python and have experience with both traditional machine learning and systems built around large language models.

I am outgoing and enjoy working in teams, especially when I can collaborate with and learn from skilled colleagues. At the same time, I am comfortable working independently and taking ownership of my work. Through my master's thesis and personal development projects, I have gained substantial experience taking larger technical projects from initial ideas and experimentation through implementation and evaluation.

Technical skills

Programming and development: Python · R · SQL · Bash · API integration · Flask · FastAPI

LLM and AI systems: LLM integration and evaluation · RAG · embeddings and retrieval · tool use · agentic workflows · structured outputs · multi-modal models

Machine learning: regression and classification · regularisation · neural networks · model selection · cross-validation · model evaluation

Tools: PyTorch · scikit-learn · Git/GitHub · Docker · Linux · HPC/Slurm

Research and projects

AI Report Evaluation

Personal project · Python · LLM · RAG · agentic workflows

- Developed a system for quality control and authoring of Norwegian building inspection reports, combining deterministic rules with LLM-based evaluation and retrieval from previously reviewed examples.
- Implemented an agentic review mode where the model can use tools to retrieve relevant rules and examples, rerun checks, and verify specific text spans before returning a structured assessment.
- Built a multi-stage workflow for report generation with multimodal input, quality evaluation, an automated revision loop, and human review.
- Uses reviewer corrections to generate new retrieval examples that can inform future evaluations.

Master's thesis · Simula Research Laboratory / NMBU

Using language models as a source of knowledge for statistical models · 2025–2026 · Grade A

- Developed three methods that use knowledge from language models as additional information in statistical prediction models.
- Evaluated the methods against established baselines, with a particular focus on generalisation to new types of data. The best method improved prediction performance by around **15%** in the main experiment.
- Developed the work further into **expert-priors**, an open-source Python library with a scikit-learn-style interface and support for multiple LLM providers.

Evidence-first media monitoring

Personal project · Python · LLM · transcription

- Developed a pipeline that monitors financial video and audio content and uses language models to identify and structure directional market claims.
- Uses existing captions when available and falls back to automated transcription when they are not.
- Combines extracted claims with market data and returns the original quote, timestamp, and source so that model outputs can be verified.

Education

MSc in Bioinformatics and Applied Statistics · NMBU 2024–2026

Focused on applied statistics, machine learning, data analysis, and bioinformatics. Throughout the degree, I worked on practical modelling and analysis problems across different datasets and gained broad experience with model development and evaluation.

Computer Science coursework · University of Bergen 2023–2024

One year of coursework in algorithms and data structures, object-oriented programming, databases, and data analysis.

BSc in Biology · University of Bergen 2020–2023

Focused on aquaculture, molecular biology, and genetics, with experience in both laboratory work and biological data analysis.

Work experience

Technician · County Governor of Østfold, Buskerud, Oslo and Akershus Jun–Nov 2024

- Conducted systematic field mapping, data collection, and reporting as part of a cross-county project around the Oslofjord.

Field Worker · Oslo Agency for Urban Environment 2023 and 2025

- Environmental fieldwork in Østmarka and Nordmarka involving mapping, inspections, and independent assessments, both individually and as part of a team.

Research Assistant · Sea Lice Research Group, University of Bergen Jan–Jun 2023

- Worked on research into RNA interference as a potential method for controlling salmon lice, including laboratory experiments, molecular biology analyses, data handling, and documentation.

Languages and interests

Languages: Norwegian (native) · English (fluent)

Interests: Photography · skiing · programming · history · film