



# Kristian Mathias Røhne

Data Scientist · Machine Learning Engineer

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## EDUCATION

2022 – 2027

### Norwegian University of Life Sciences (NMBU)

MSc Data Science · Specialization: Mathematics & Statistics

Exchange semester at University of California, Berkeley (Spring 2025)

Master's thesis: Hyperspectral imaging for smart crop production (expected 2027)

2017 – 2020

### Hamar Katedralskole

High School — Media & Communication

## EXPERIENCE

Sep 2024 – Dec 2025 **Animalia**

Data Science Assistant

Developed and deployed production ML and analytics systems for the Norwegian meat industry. Projects include a CV pipeline for pig weight estimation, real-time anomaly detection across slaughterhouse lines, and the Kalkyle slaughter analytics API — all actively used by Animalia and Nortura.

Press

[Kameraveiing – en ny måte å veie gris på?](#) — Ingristips / svin.no, Feb 2026

[Ta bilde – få levendevekt](#) — Animalia, Feb 2026

Summer 2026

### Norwegian University of Life Sciences (NMBU) — SmartWheat Project

Field Research Assistant

Collected and processed hyperspectral, multispectral, thermal, and RGB imaging data from UAV platforms for precision agriculture and crop monitoring research. Directly connected to upcoming Master's thesis on hyperspectral imaging for smart crop production.

2026 – Present

### Jordleie.no (Student Startup)

Co-founder & Full-Stack Developer

Co-founded a farmland rental marketplace where landowners list fields and tenants bid through open auctions. Built and own the full technical architecture end-to-end — backend APIs, database, frontend, and Docker deployment. Currently approaching MVP; demo live at [jordleie-no.vercel.app](http://jordleie-no.vercel.app). Stack: FastAPI, Node.js (TypeScript), React (TypeScript), PostgreSQL, Docker.

## SKILLS

**Core**

Python · R · SQL · Bash · Java · C++ · Julia

**ML & CV**

PyTorch · TensorFlow · scikit-learn · YOLO · U-Net · SAM · ResNet · Triton

**Math & Stats**

Linear Algebra · Optimization · Applied Statistics · Matrix Methods

**Web & Backend**

FastAPI · Node.js (TS) · React (TS) · Next.js · TypeScript · Flask · Angular · PostgreSQL

## DevOps

Docker · Git · Production ML Deployment

## Remote Sensing

Hyperspectral Imaging · Multispectral Imaging · UAV / Drones · Plant Phenotyping · Precision Agriculture

## ACADEMIC PROJECTS

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2025 · NMBU

### Low-Rank Neural Network Framework

Python · PyTorch · Linear Algebra

Configurable ML framework training dense and low-rank (SVD-factorized) neural networks. Dynamic low-rank architecture achieved 96.2% accuracy on MNIST with fewer parameters than a dense baseline.

[GitHub →](#)

2025 · NMBU

### Graph Analytics Framework in C++

C++ · Graph Theory · Tarjan's SCC · OOP

High-performance graph library featuring Tarjan's SCC, diamond-pattern detection, and benchmarked adjacency-list vs. adjacency-matrix representations. Full Rule-of-Five memory management.

[GitHub →](#)

2025 · UC Berkeley

### NGordnet — WordNet Hyponym Explorer

Java · Graph Theory · DFS · Data Structures

Web-based linguistic tool combining Princeton WordNet with Google N-Gram frequency data to explore semantic hyponym relationships. Built in Java (CS61B).

[GitHub →](#)

2025 · UC Berkeley

### Dungeon Explorer — Tile-Based Game Engine

Java · OOP · Procedural Generation

Complete tile-based game engine in Java (CS61B). Procedurally generated worlds, save/load, HUD, seeded randomness, and full game loop.

[GitHub →](#)

2024 · NMBU

### Equity Valuation of Yara International

Python · Pandas · CAPM · DDM · Finance

Full financial analysis: accounting ratios, CAPM beta estimation ( $\beta=0.78$ ), Dividend Discount Model valuation, WACC, and climate risk assessment.

## ADDITIONAL EXPERIENCE

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2019 – Present

### Crop Quality Inspector & Team Lead

Felleskjøpet Agri

Seasonal inspections of seed production fields — invasive species, contamination, yield estimation. Progressed to team lead coordinating fieldwork.

2021 – 2022

### Engineering Soldier

Royal Norwegian Air Force, Ørland Air Base

Operated heavy machinery (excavators, wheel loaders, trucks) in an engineering unit.

2022 – 2023

### Head of Marketing (Volunteer)

DataSci NMBU

2020 – 2021

### Production & Industrial Work

Nortura Rudshøgda, Veidekke, Pilkington, TINE

Temporary roles in food production, construction, and manufacturing.

2012 – Present

**Farm Work**

Røhne Østre

Grain and potato farm — seasonal fieldwork, machinery operation, and general farm management.

LANGUAGES

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Native

**Norwegian**

Fluent

**English**

CERTIFICATES & WORKSHOPS

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Mar 2026

**From Phenotyping Experiment to FAIR Data**

NMBU — 25 hours hands-on, 1 ECTS equivalent