Oline A. Ranum

Informatics Institute
University of Amsterdam (UvA)
Science Park 904, 1098 XH Amsterdam, Netherlands

(+47) 950 46 897
oline.ranum@student.uva.nl
olineranum.github.io

- Currently undertaking a **Master's degree** of **Artificial Intelligence** (2nd year).
- **Bachelor's degree** in **Physics**, including internships at **CERN** and **LBNL**.
- **Founder** of **DeepSign AS** (recipient of STUD-ENT 100,000 EUR grant) and BliFlink.org.
- Committed to shaping a warmer future for AI and developing **assistive tools for disabled communities**.

Education

University of Amsterdam (UvA), Netherlands

MSc Artificial Intelligence | ELLIS Honours Program | 120 EC (Current) 2022 - 2024
- Deep Learning, Computer Vision, Natural Language Processing

MSc Astroparticle and Gravitational Physics | 54 EC 2020 - 2021
- Entrepreneurship, Detector development, Mathematics for physics

University of Oslo (UiO), Norway

BSc Physics and Astronomy | 210 EC 2016 - 2020
- Computational Physics, Mathematics, Programming, Undergraduate Research

BSc International Relations | 60 EC 2015 - 2016
- International Law, Organization and Economy, Human Rights Theory, Philosophy

University of California, Berkeley (UCB), USA

Study abroad | 30 EC 2019
- Data-Driven Astronomy, Research Internship

Stellenbosch University, South Africa

Summer School: Advanced Nuclear Reactions and Applications in Astrophysics | 5 EC 2019

Research

University of Amsterdam, Netherlands

Research project deep learning: SE(3)-Equivariant Neural Rendering 2023
Research project computer vision: Steerable Diffusion for Scene Generation 2023

DeepSign AS, Oslo, Norway

Project: Machine translation methods for Norwegian and Norwegian sign language. 2022

CERN, Geneva, Switzerland

Technical internship in experimental physics, AEgIS group 2020
- Building software for analysis of particle reactions and fiber calibration

Independent research, AEgIS group 2019
- Analysis of positronium production using an annihilation cryogenic tracker

University of California, Berkeley, USA

Research project, Lawrence Berkeley National Lab (LBNL), Bernstein Group 2019
- Detector calibration, analysis of Yt86 production rates

Research Project, Berkeley Astrophysical Institute 2019
- Classifying white dwarf spectra with the Cannon model

Experience

CEO & Founder at DeepSign AS, Oslo, Norway Jan. 2021 - Jan. 2022
- Strategy, management, finances, sales, team development, product development
- Accelerators: ACE Fall Cohort 2022 and Demonstrator Lab SP
- Media Coverage: Titan.uio.no, Argument.no

CTO & Founder at BliFlink, Oslo, Norway Mar. 2020 - Mar. 2022
- Developed a platform for free online tutoring during COVID-19
- Management, implementation, product development

Research assistant and Lab Instructor, University of Oslo, Norway 2018
- Developed laboratory assignments and program for undergraduate education
- Developed RGB-based motion capture system for chaotic motion detection
- Lab instructor in experimental physics

Achievements

Grants Received

STUD-ENT Grant EUR 100,000, Norwegian Research Council, The DeepSign Project April 2021

Publications

1. Ranum, O., Otterspeer, G., Andersen, J., Roelofsen, F., (2024). *3D-LEX v1.0 3D Lexicons for American Sign Language and Sign Language of the Netherlands*. In preparation for LREC-COLING 2024, 11th Workshop on the Representation and Processing of Sign Languages: Evaluation of Sign Language Resources.
2. Hu, A., Ranum, O., Pozrikidou, C., & Zhou, M. (2023). *Reproducibility study of "Joint Multisided Exposure Fairness for Recommendation."* ML Reproducibility Challenge 2022. openreview.net/forum?id=A0Sjs3IJWb-
3. Rienäcker, B., Brusa, R. S., Caravita, R., Mariazzi, S., Penasa, L., Pino, F., Ranum, O. A., & Nebbia, G. (2022). *A fiber detector to monitor ortho-Ps formation and decay*. Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1027, 166275. sciencedirect.com/science/article/pii/S0168900221011062

Invited Talks

"Diagnosing positronium using the fast annihilation cryogenic tracker of AE$\bar{g}$IS at CERN"

- AE$\bar{g}$IS Collaboration Meeting, CERN, Switzerland 24.10.2019
- INTPART, Witwatersrand University, South Africa 30.11.2019

"Student entrepreneurship and innovation for social good"

- University of Oslo - "A New Beginning", UiO, Norway 31.08.2021

Academic Responsibilities

Physics Student Council - Student Representative, UiO, Norway

- Board of Education 2017 - 2018
- Institute Board and Master's Degree Board 2018

Physics Discussion Groups, UiO, Norway

- Establishing and Operating Discussion Groups in Physics 2018

International Association for the Exchange of Students for Technical Experience (IAESTE), Norway 2017-2018

- Event Manager and Organizer of IAESTE's Career Fair, Representative

The Realist Union, UiO, Norway 2016 - 2018

- Event Manager and Volunteer

SAIH - Students and Academics International Help Foundation, UiO, Norway 2015

- Representative

Skills

Programming Python (8 years), C++ (2 years), Matlab (4 years), ADQL/SQL (1 year), Front-end (CSS, HTML)
Languages Norwegian (Native), English (Fluent), Norwegian Sign Language (Good)

References

Prof. dr. Floris Roelofsen, Professor of computational linguistics and head of Sign Lab Amsterdam at UvA
Reference available upon request
Dr. Stefan Haider, Technical Coordinator AEgIS Experiment at CERN
Reference available upon request
Dr. Benjamin Rienäcker, Researcher AEgIS Experiment at CERN
Reference available upon request
Prof. dr. Daniel Weisz, Associate Professor of Astronomy at the University of California, Berkeley
Reference available upon request
Prof. dr. Lee Bernstein, Head of the Nuclear Data Group at LBNL
Reference available upon request
Dr. Andrew Voyles, Research Scientist at LBNL
Reference available upon request
Prof. dr. Alexander L. Reed, Professor in High-Energy Physics at UiO
Reference available upon request
Prof. dr. Arnt Inge Vistnes, Associate Professor at the UiO
Reference available upon request