Felix Oscar **Ærtebjerg**

Profile

Highly motivated data science and machine learning engineer with multiple independently completed projects and real world experience. Proficient in probabilistic mathematics and machine learning. Worked multiple years with Graph Neural Networks within Chemistry and Physics. Experienced as a machine learning engineer developing products within the insurance industry.

Contact details

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Personal information

Citizenship: **Denmark**, **Germany**
Languages: **Danish**, **German** (native), **English** (native)

Skills

- Python, PyTorch, JAX
- Matlab, GCP
- Communication and team collaboration

Hobbies

- Biking
- Reading
- Surfing
- Hiking

Experience

Student Machine Learning Engineer at *DeepGruble (Denmark).* **2024.06–pres.**
◇ Natural language processing, product development, machine learning, computer vision, customer communication.

Teaching Assistant for Introduction to Machine Learning at *Technical University of Denmark (DTU).* **2023.08–2024.06**
◇ Teaching, machine learning, communication.

Lab Assistant at *Haldor Topsoe (Denmark).* **2022.01–2023.10**
◇ Data collection processes, lab assistant for the catalyst & battery group.

Projects

Master Thesis. *"Enhancing Atomistic Modeling in Graph Neural Networks through Optimized Connectivity."* **2025.02-2025.08**
◇ Improving performance of Geometric Graph Neural Network using probabilistic optimization and novel machine learning approaches.

Research Project. *"Neural Network Variational Monte Carlo for the Quantum Many-body Problem."* **2024.08-2025.01**
◇ Examining novel learning & performance algorithms in JAX to form a scaling law for Variational Quantum Monte Carlo methods.

Research Project. *"Data-driven Feature Extraction and Prediction using Deep Neural Networks."* **2024.02-2024.08**
◇ Development of the GraPE-Chem (Graph-based Property Estimation for Chemistry) toolbox for Python & performing a meta review using it.

Bachelor Thesis. *"Using AI to study bifurcation in dynamical systems."* **2023.02-2023.07**
◇ Using ML models for the prediction of bifurcation points in dynamical systems such as chemical reactions.

Education

Master of Science. Mathematical Modeling and Computation. *Technical University of Denmark (DTU).* **2023.09–2025.08**
◇ Higher mathematics, machine learning, advanced programming, applied mathematical modeling.

Bachelor of Science. General Engineering. *Technical University of Denmark (DTU).* **2020.09–2023.07**
◇ Mathematical modeling, numerical methods, mathematical optimization, mathematics, physics, chemistry.

Additional education

Nordic Probabilistic AI Summer School. **2024.07**
◇ Probabilistic machine learning, applied mathematical modeling.

Semester abroad, University of Madison, Wisconsin. **2022.09-.12**
◇ Statistical modeling, probability theory, operation research.

Selected relevant courses

Advanced Machine Learning – Bayesian Machine Learning – Python and High Performance Computing – Diffusion and Stochastic Differential Equations – Stochastic Processes – Probability Theory