

Job Description

Job Title

AI / Machine Learning Intern (AI for Chemistry and Materials)

About NovaMea SA

NovaMea is a Swiss EPFL spin-off developing next-generation technologies and devices for electrochemical energy storage and conversion. We are connecting the dots for energy sovereignty by developing physical solutions to electrification. We have created a universal materials platform that produces novel membranes for electro-recycling (e.g., Li recycling), green hydrogen production, and long duration energy storage by flow batteries. We have also created an AI platform to accelerate the development and validation of these novel technologies.

This internship is an opportunity to build deployable AI systems in a physical, deep-tech startup environment.

Job Overview

We are looking for a AI / Machine Learning Intern to contribute to the construction of an internal AI platform for materials validation. You will work on:

- turning research code into usable tools
- setting up local AI infrastructure
- integrating models with real experimental data
- ensuring data sovereignty and industrial usability

The goal: turning academic AI research into an industrially relevant tool

Position Conditions

60% or above, to be discussed; Master internship

Work Location

Lausanne, Switzerland (EPFL Innovation Park)

Start Date

From Summer 2026 or as agreed.

Tasks and Responsibilities

Main tasks (as lead)

1. AI Model Deployment & Engineering

- Take open-source AI/ML models and adapt them into internal tools/software
- Convert research code into robust, reproducible pipelines
- Package models for local or hybrid deployment

2. Infrastructure Setup

- Set up and manage local AI infrastructure:
- GPU environment (local server or workstation)
- Model training and inference pipelines
- Explore and implement cloud vs local trade-offs
- Ensure efficient compute usage (incl. API/token-based models when needed)

3. Data Engineering & Management

- Structure and manage experimental and materials datasets
- Implement data storage solutions: Local (on-premise) and Cloud (if needed)
- Ensure data integrity, versioning, and traceability

Additional contributions (as co-lead or collaborator)

4. Model Training & Adaptation

- Fine-tune or retrain models using internal data
- Work on materials property prediction, process optimization, scientific data interpretation
- Evaluate model performance and limitations

5. AI Strategy & Technical Choices

- Assess different AI approaches: Open-source vs API-based models, Local vs cloud deployment
- Understand and document trade-offs: Data privacy, IP protection, Cost (compute / tokens) and Scalability

6. Internal Support & Prototyping

- Support internal teams in using AI tools
- Build simple interfaces or scripts for non-expert users
- Provide technical support (light “customer care”)

The list of tasks and responsibilities mentioned in this document is indicative. Other tasks and responsibilities may be assigned following discussion.

Qualifications and Skills

If you don't have all these skills but are a quicker learner with a strong software engineering background, please apply as well.

- Bachelor or Master's student in Computer Science, Data Science, Machine Learning, or related fields
- Strong programming skills, familiarity with ML frameworks, experience with model training and evaluation, handling datasets
- Experience working with GPUs / CUDA (basic level), ability to work with open-source codebases, basic understanding of APIs and token-based AI services, Data storage solutions
- Understanding of LLMs or modern AI models, awareness of Data privacy and security and trade-offs in AI system design
- Hands-on and pragmatic mindset, ability to work independently in a startup environment and curious about applying AI to real-world problems

Benefits

- Build end-to-end AI system
- Exposure to real industrial problem and constraints (IP, scale, cost)
- Work at the intersection of AI, materials science and climate tech
- Collaboration with EPFL ecosystem

Application

Please send your CV and cover letter to Dr. Xingyu Wu, CEO, NovaMea SA.

E-mail: xingyu.wu@novamea.swiss

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