

Applied AI / ML Lead Engineer

Location: Berlin, Germany

Type: Permanent (Full-time)

Start Date: As soon as possible / by arrangement

ABOUT DAINA

DAiNA is a precision-oncology company focused on enabling personalized cancer treatment for individual patients. We combine comprehensive molecular tumor data including genomics, transcriptomics (bulk, single cell and spatial), proteomics and epigenetics, with AI-driven analysis. Our platform connects multi-omic profiling with functional ex-vivo tumor models and personalized liquid-biopsy monitoring, creating a continuous workflow from biopsy and treatment selection through to therapy monitoring and adaptation. We also operate GMP manufacturing to produce individualized N=1 therapeutics. In short, we help physicians make more informed, personalized treatment decisions based on high-dimensional molecular tumor data.

For more information, visit: www.daina.com

THE ROLE

As Applied AI / ML Lead Engineer, you will help build DAiNA's applied AI capability at the core of our precision-oncology platform. Your focus will be on translating modern machine learning, large language models and retrieval-augmented generation into robust, secure and clinically relevant software systems.

You will design and implement AI-driven workflows that support molecular data interpretation, clinical reporting, knowledge retrieval, decision support and digital-twin development. A key part of the role is to ensure that sensitive patient and molecular data can be processed in a secure, compliant and auditable environment, with strong control over model behavior, data provenance and system performance.

WHAT YOU'LL DO

- Design, build and operate applied AI/ML systems for DAiNA's precision-oncology platform
- Develop and maintain retrieval-augmented generation (RAG) architectures for molecular data interpretation, clinical reporting, literature/knowledge retrieval and internal decision-support workflows.
- Build robust components for document ingestion, chunking, embedding, vector search, re-ranking, grounding, citation handling and evaluation.
- Deploy and operate open-weight and/or self-hosted models in secure cloud or isolated environments, reducing unnecessary dependency on external AI providers for sensitive patient data.
- Evaluate and fine-tune domain-specific models where this adds measurable value, using reproducible training, validation and benchmarking workflows.
- Integrate AI components into DAiNA's reporting layer, data platform and broader computational oncology workflows.

- Develop guardrails, audit trails, hallucination-control strategies and human-in-the-loop review mechanisms for sensitive scientific and clinical use cases.
- Lead and coordinate a small distributed technical team or external specialists across architecture, retrieval, model serving, fine-tuning and AI evaluation.
- Work closely with bioinformatics, data engineering, clinical, wet-lab and management stakeholders to ensure AI systems address real workflow needs.

WHAT YOU BRING

- Strong software engineering background with hands-on experience building production-grade ML, AI or LLM-based systems.
- Practical experience with large language models, including open-weight model families
- Deep practical understanding of RAG systems, including embeddings, vector databases, chunking strategies, retrieval, re-ranking, grounding and evaluation.
- Experience with MLOps practices such as model/version management, automated evaluation, monitoring, logging, deployment and reproducibility.
- Strong communication skills and the ability to explain technical trade-offs clearly to scientific, clinical and management stakeholders.

NICE TO HAVE

- Experience in healthcare, biotech, diagnostics, pharma or another regulated environment.
- Experience with clinical or biomedical data, including molecular profiles, omics data, pathology reports, clinical notes, literature, treatment guidelines or real-world evidence.
- Familiarity with digital twin approaches, computational oncology, cancer biology or personalized medicine.

WHY DAINA?

- Employer contributions toward private health insurance or supplementary health coverage, as well as pension or retirement savings.
- Hybrid model with ~60% of working time **expected** on-site and the rest **remotely**, depending on team and business needs.
- Performance-based bonus opportunity, depending on company and individual performance.
- A personal development budget for conferences, courses, certifications, and training.
- The opportunity to work directly on real patient cases and help shape a first-in-class precision-oncology platform
- A proactive, collaborative team with fast decision-making and strong ownership of your domain.

HOW TO APPLY

Send your CV and a short note on why this role fits you to recruiting@daina.com, quoting “Applied AI / ML Lead Engineer” in the subject line. We review applications on a rolling basis and aim to reply quickly.



DAiNA is an equal-opportunity employer. We welcome applicants of every background and assess every candidate on merit, regardless of age, gender, ethnicity, religion, disability, sexual orientation or origin. If you need any adjustment to the process, let us know in your application.