

Principal AI Architect

Location: San Francisco (US) or Berlin (GER)

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 Principal AI Architect, you will define the reference architecture for DAiNA's applied AI and GenAI platform. You will set the technical direction for retrieval, model serving, fine-tuning, evaluation, security and model governance.

You will translate advances in open-weight models, RAG and secure AI deployment into practical architecture decisions for DAiNA's engineering teams. The role bridges AI R&D and operational implementation, with a strong focus on data residency, privacy, compliance and sensitive biomedical use cases.

WHAT YOU'LL DO

- Own the reference architecture for DAiNA's AI/GenAI stack across retrieval, serving, fine-tuning, evaluation and governance.
- Define standards for RAG, embeddings, vector search, re-ranking, grounding, citation handling and evaluation.
- Translate new open-weight model releases and GenAI tooling into a prioritized implementation roadmap.
- Set standards for secure deployment, reproducibility, observability, model versioning and auditability.
- Guide decisions on retrieval vs. fine-tuning vs. prompt engineering vs. self-hosted inference.
- Design architectures that respect data residency, privacy and compliance requirements.
- Work with AI/ML, engineering, bioinformatics, data and clinical teams to support real DAiNA workflows.
- Review and guide implementation work by internal teams or external specialists.

WHAT YOU BRING

- Senior/principal-level experience architecting AI, ML or LLM systems in production.
- Deep understanding of RAG, embeddings, vector databases, model serving, fine-tuning and evaluation.
- Experience with open-weight models and self-hosted or controlled inference environments.
- Strong systems thinking and ability to design scalable, secure and maintainable architectures.
- Experience setting technical standards and guiding engineering teams.
- Sound judgement around data privacy, security, compliance and model governance.
- Ability to translate fast-moving AI research into pragmatic product and platform decisions.
- Excellent communication across technical, scientific and management stakeholders.

NICE TO HAVE

- Experience in healthcare, biotech, pharma, diagnostics or another regulated environment.
- Experience designing systems for data residency, data sovereignty or sensitive-data constraints.
- Prior staff/principal-level ownership of an AI platform or GenAI infrastructure.
- Familiarity with biomedical data, omics data, clinical reports, treatment guidelines or real-world evidence.
- Experience with LLM evaluation frameworks, hallucination control, grounding, audit trails and human-in-the-loop review.
- Familiarity with digital twin approaches, computational oncology 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 “Principal AI Architect” 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.