SYSTEM ARCHITECTURE · SCIENTIFIC DATA · APPLIED AI

Hanno Knatz

Hanno Knatz is a technical leader and system architect working across scientific software, data platforms and applied AI. In global pharmaceutical R&D, he led a Lab IT engineering team and owned the architecture and lifecycle of a biological assay analysis platform used across laboratories worldwide.

Current independent work focuses on AI agents, local inference and workflow automation.

Mainz, Germany ·

SELECTED PROJECTS

Independent work since Apr 2026.

Hefter.app

IN DEVELOPMENT

Private document workflows

A focused tool for turning everyday documents into structured, searchable information. Built around a privacy-first workflow and a deliberately simple interface. More will be shared when it is ready.

AI Lab

EXPERIMENT

Local AI · Applied research · Automation

An independent environment for exploring local models, agentic workflows and practical automation. The work spans several private prototypes and early products, with an emphasis on useful systems that remain understandable, controllable and owned.

PROFESSIONAL EXPERIENCE

Associate Director / Team Lead, Lab IT

Dec 2021 – Mar 2026

BioNTech SE · Mainz

- Led a team of System Engineers delivering software and data analysis solutions for scientific R&D.
- Defined the system concept and served as System Owner for a biological assay data analysis platform operated across global laboratories, with responsibility for architecture, implementation and lifecycle management.
- Established the platform as a data provider for a closed molecule optimization loop — assay analysis results feeding directly back into personalized cancer therapy development.
- Translated scientific and business requirements into technical solutions, coordinating researchers, IT teams and external vendors in a regulated environment.

Senior Implementation Analyst

Sep 2018 – Dec 2021

Thermo Fisher Scientific · Dreieich

- Consulted on and implemented enterprise Laboratory Information Management Systems (LIMS).
- Analyzed laboratory workflows and translated business requirements into technical solutions.
- Delivered system configuration, validation and user training.

Automation Specialist

Dec 2015 – Sep 2018

Roche · Penzberg

- Designed and implemented software solutions supporting pharmaceutical production.
- Developed database logic and reporting services.

IT Consultant

Jun 2015 – Nov 2015

FERCHAU Engineering · Munich

- Contributed to projects automating pharmaceutical documentation.

EARLIER EXPERIENCE

Sep 2014 – Mar 2015 Master Thesis Student · BARC · Roche, Penzberg

Jan 2014 – Aug 2014 Database Administrator · University Medical Center Mainz

Sep 2013 – Jan 2014 Research Assistant · Johannes Gutenberg University Mainz

CORE COMPETENCIES

ARCHITECTURE & DELIVERY

System & Solution Architecture · System Ownership · Team & Technical Leadership · Stakeholder Management · Lifecycle Management

DATA & SCIENTIFIC SYSTEMS

Python · SQL · Databricks · Laboratory Informatics / LIMS · Scientific Data Management · Bioinformatics

AI SYSTEMS & INFRASTRUCTURE

Agentic Systems · Model, Provider & Harness Routing · MCP, Tools & Memory · Knowledge & Inference Pipelines · ComfyUI Workflows · Local & External Compute · Hosting, Relays & Deployment

GOVERNANCE

Regulated Pharmaceutical Environments · System Validation · Data Governance

EDUCATION & LANGUAGES

M.Sc. Applied Bioinformatics
Johannes Gutenberg University Mainz
2012 – 2015

Master thesis with Roche Diagnostics: BARC, an automated recipe comparison tool for pharmaceutical production.

B.Sc. Biology
Johannes Gutenberg University Mainz
2009 – 2012

German	Native
English	Professional
Portuguese	Intermediate