# Christian Bernhard

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## **Summary**

Al Engineer & Consultant with experience across multiple industries including automotive, public sector, defense, and SaaS. Specialized in Generative AI (LLMs, RAG, Agents, multi-agent systems), with strong expertise in AI solution design, fine-tuning, evaluation, governance, and end-to-end deployment on cloud and on-prem environments. Proven track record in leading technical teams, engaging with C-level stakeholders, and delivering enterprise-grade AI systems from proof of concept to production in highly confidential and regulated settings, while also driving pre-sales engagements and client workshops.

### **Education**

#### M. Sc. Computer Science - Ludwig-Maximilians-Universität München

2022 - 2024

• Thesis at BMW: Fine-Tuning Retriever and Generator Components in RAG: A Cross Domain-Study (1.4)

### B. Sc. Business Informatics - University of Applied Sciences München

2018 - 2022

• Bachelor thesis: Natural Language Processing – Effort Estimation in Agile Projects (1.8)

### Skills

**Languages:** Pyth

Python, Javascript

Technologies:

LangChain, LangGraph, HuggingFace, Transformers, PyTorch, FastAPI, Evaluation

(LangSmith, RAGAS, DeepEval), IBM Watsonxai Orchestrate, Nvidia NIMs, Git, Azure,

AzureAI, Docker, Kubernetes

## **Work Experience**

#### Al Engineer/Al Consultant - Cancom

05/2025 - now

- Designing, developing and delivering enterprise-grade AI solutions (LLMs, RAG, Agents) across diverse industries e.g. supported public sector and defense clients in highly confidential environments (SÜ2).
- Conceptualized and held various AI Discovery Workshop with executives and directors to identify pain points, define AI use cases, and implement MVPs. Acted as technical pre-sales consultant, advising C-Suite stakeholders and translating business requirements into technical AI roadmaps.
- User enablement of our clients for the effective use of our AI solutions e.g. German federal ministries.
- · Conduct technical interviews and recruited AI Talent

#### Al Researcher - BMW

10/2024 - 05/2025

- · LoRA-based fine-tuning on small and large language models (e.g. LLaMA -3.1-8b, LLaMA-3.3.70b)
- Finetuning embedding models to enhance retrieval quality
- Evaluated end-to-end RAG systems using custom fine-tuned retrievers and LLMs
- Integrated LLM-as-a-Judge metrics and developed evaluation pipelines for automated quality scoring
- Leveraged state-of-the-art AI accelerator infrastructure (NVIDIA H100, DGX Cluster) with TensorRT-LLM for efficient training and inference

#### **Head of Operations - Agarios**

04/2023 - 04/2025

- started as backend developer, developing different backend microservices
- led a team of 10+ software engineers and managed the development of the Luna Platform a SaaS solution that enables businesses to seamlessly integrate with quantum computing backends and accelerates quantum application development: <a href="https://www.docs.agarios.com">www.docs.agarios.com</a>

- lead our go to market strategy in 2024 and supervise our Marketing and HR department
- take part of conventions, represent the company, lead technical demos for our clients and partners like SAP, BASF, Siemens, BMW, etc.
- Conducted technical interviews and recruited software engineers

#### Founder - Alnleuchtend

09/2023 - now

- As part of my self-employment as an AI consultant, I advise companies on AI projects, develop individual AI software and hold training courses on AI throughout Germany.
- My clients include municipalities and public institutions, global companies such as Expedia, as well as private individuals including former German President Christian Wulff.
- For more information: https://www.ainleuchtend.de/

#### **Software Engineer - Adesso SE**

09/2020 - 03/2023

- Developing a deep learning project; Developing and launching the iPadOS app "wryte" from scratch
- $\cdot$  Team Leader for an international team, responsible for the App Store launch and updates
- appearance on the german tv-version of shark tank, temporary rank 1 Appstore in the education section, over 100k downloads

#### **Engineering Fellow – Tech4Germany Fellowship Program (Berlin)**

08/2022 - 11/2022

- 3 months fellowship program in Berlin 32 talents develop prototypes for concrete digital projects of the federal administration
- Developed a web-app dashboard for the Federal Ministry of Finance

#### **Business Intelligence - Swiss Life**

04/2020 - 09/2020

SQL test scripts, Data Warehousing

#### Datamanagement for Machine Learning - ProSiebenSat. 1

08/2019 - 12/2019

• Supporting the agile development team in various data technology projects

# **Further Programming Expertise**

#### Courses

I dedicate time daily to learning, primarily through hands-on projects in private repositories, thousands of hours of YouTube study, and my personal Obsidian knowledge base. Alongside this, I've completed 20+ AI certifications on Coursera and DeepLearning.AI, covering LLMs, RAG, Agents, Evaluation, LangChain, LangGraph, and MCP. Certificates: <a href="mailto:christian-bernhard.com/certificates">christian-bernhard.com/certificates</a>

#### **Furthermore**

- Participated in the HackaTUM 2023 in Munich from the Technical University of Munich
- Participated in the Kaggle Challenge: Computer Vision Hacking the Human Vasculature
- LLM Implementation: Programmed LLaMA-2 from scratch in Python for research purposes

**Languages:** German (Native), English (Fluent), Spanish (Beginner), Mandarin (Beginner)