



Sayantan Sarkar

Work permit: German **Nationality:** Indian **Date of birth:** 2 Jan 2001

Place of birth: Kolkata, India **Gender:** Male **Phone number:** (+49) 015510292754

Email address: sayantan.sarkar0201@gmail.com

LinkedIn: <https://www.linkedin.com/in/sayantan-sarkar-635635200/>

Home: Dr Hans Kapfinger Str. 13, 94032 Passau (Germany)

ABOUT ME

A software developer with a primary focus on developing robust back-end applications and advancing expertise in artificial intelligence and machine learning. Currently pursuing a Master's degree in Artificial Intelligence, with a profound interest in AI/ML technologies. Proficient in multiple programming languages, including Python and Java, with one year of professional experience in backend development using Spring Boot. Demonstrated success in high-impact projects within the industrial sector, I am eager to leverage my technical expertise, problem-solving skills, and passion for innovation to deliver meaningful contributions.

SKILLS

Java / Python / C++ / JavaScript / Machine Learning / Deep Learning / PyTorch / TensorFlow / scikit-learn / Transformers / ComfyUI / LLM / Stable Diffusion / Hugging Face Transformers / fine-tuning (LoRA/QLoRA) / Agentic Applications / prompt engineering / explainability / LangChain / LangGraph / LangSmith / vector DBs (Chroma/FAISS) / PostgreSQL / SQL / MongoDB / Kafka / Redis / Docker / GitHub / Jenkins / Prometheus / Grafana / Kibana / Spring Boot / REST APIs / OpenFeign / WebFlux

WORK EXPERIENCE

DigiTech Solutions Pvt – India

Country: India

Machine Learning Developer Intern

[Jan 2024 – Apr 2024]

- Built an image classification pipeline (using **PyTorch/TensorFlow** and **CNN**) that was 85% accurate on an internal dataset. To make training more stable, I used data augmentation, learning rate scheduling, and early stopping.
- Managed the ML lifecycle, which included preprocessing the data, splitting it into training and validation sets, setting hyperparameters like batch size, learning rate, and epochs, and monitoring the model once it was deployed with **Prometheus** and **Grafana** (latency, throughput, and drift proxies).

Blibli (Quinbay) – India

Country: India

Backend Developer

[Jan 2023 – Dec 2023]

- I upgraded the order-api gateway to **Spring Boot 2.7.x**, added **OpenFeign**, moved JUnit 4 to 5, fixed circular dependencies, and updated Swagger/OpenAPI. This made the build more stable and increased test coverage.
- Delivered Excel upload using **WebFlux** with row-level error tracking; added **Kafka** to payloads to make them richer; and improved **JPA queries** on **PostgreSQL** for dependable batch processing at scale.
- Fixed high-severity production issues with hotfixes to keep the service stable. Wrote design documents for features and bug fixes that the team used.

HighRadius – Kolkata, India

City: Kolkata | Country: India

Full-Stack Developer Intern

[Feb 2022 – Apr 2022]

- Built features for a B2B invoicing software that uses AI. The frontend is in React and the backend is in Java.
- Added input validation and simple logging to a Flask microservice for estimating the initial partial payment amount. It was wrapped in a REST API.

PROJECTS

AI/ML Projects

NQL-to-SQL Agent for Natural Language Queries

- Built an agentic pipeline (LangChain/LangGraph) that turned NL queries into SQL over a PostgreSQL schema.

Hate Comment Analysis Agent

- Build an agentic system (LangChain & Chroma DB) that can analyse hate comments to a greater extent (Dark Scarcasm & Metaphors).

Q&A for Specific Domains (RAG based)

- Answers to all the queries based on specific domains or company policy.

GitHub Code Analyser

- Analyse any public repository and answers to the user queries based on it. Uses chunking, retrieval, LLM & LangChain.

Fine Tuning LLMs & LoRA/QLoRA

Image Generation Using GAN

- Developed a Generative Adversarial Network (GAN) model capable of generating images, utilizing Python and TensorFlow for implementation and training

Audio Recognition Using CNN

- Developed a CNN-based model for auditory recognition of distinct woodland species, using Python and TensorFlow for implementation and training.

Full-Stack Application Projects

Quiz Application

- Build a dynamic scoreboard and a room joining feature. We utilized Vue.js for the frontend and Spring Boot 2.7 and PostgreSQL for the backend. Interactive Timed and Untimed Quizzes were available in the app. A complete Quiz App for varied quiz interests was created through collaboration.

EDUCATION AND TRAINING

University of Passau — Masters in AI Engineering — Oct 2024 - Present

SRM University of Science and Technology — B.Tech, Computer Science — Jun 2019 - Jun 2023

CERTIFICATIONS

Fundamentals of Red Hat Enterprise Linux - Coursera | Front-end - Coursera | AWS with Machine Learning - AWS Academy | MATLAB - MathWorks | Machine Learning - NPTEL | Django - Udemy

LANGUAGE SKILLS

Other language(s): English C1 | German A1 | Bengali (Mother Tongue) | Hindi B2