

Muhammad Mahir Hasan Chowdhury

✉ mahirhasancse@gmail.com 📍 Essen, Germany 🔗 linkedin.com/in/mahir-hasan

🐙 github.com/mahirsust 🔗 mahirsust.github.io

Technical Skills

Languages & Frameworks — Python, PHP, FastAPI, Laravel

Databases — MySQL, PostgreSQL, MongoDB

Web & APIs — HTML, CSS, JavaScript, Bootstrap, REST APIs, Swagger/OpenAPI

Tools & Platforms — Git, GitLab, GitHub, Docker, CI/CD, Jira, Confluence, Postman

AI Tools — LLMs, RAG pipelines, Prompt Engineering, ChromaDB, Ollama, ClaudeCode, Copilot

Work Experiences

08/2023 – 09/2024
Oberhausen, Germany

Software Developer - Working Student

bepro GmbH 🔗

- **Automated** manual **email-attachment handling** by integrating **Python** into **Laravel**, improving file organization and **reducing processing effort**.
- Translated **business requirements** into ERP features using **PHP** and **Laravel 10**, **bridging stakeholder** and technical needs.
- **Collaborated** via **GitLab** workflows: **feature branching**, **code reviews** and **merge requests**.

09/2021 – 11/2022
Dortmund, Germany

Software Developer - Working Student

Fabforce GmbH & Co. KG 🔗

- Analyzed **Bosch XDK vibration sensor data** to **develop machine movement-detection algorithms**, turning raw sensor data into operational insights visualized via **Grafana**.
- Built a **Python library** for generating **pseudo-random signals** using basic signal templates and **NumPy**.
- Coordinated **cross-functional teams**, tracking issues and documenting progress using **Jira** and **Confluence**.

Award

Winner [BMW Challenge] 🔗

Smart City Hack, 10/2021

- Analyzed vehicle telemetry data with **Python** to detect public EV charging stations as part of **BMW's "Park & Charge"** challenge.
- Designed a data-driven **bonus-point** system.

Projects

Product API 🔗

Symfony 7.4, PHP 8.2, Doctrine ORM, REST API, Swagger/OpenAPI, CI/CD

- Built a **REST API** with full CRUD operations, Swagger/OpenAPI documentation and an **automated CI/CD pipeline** with unit tests via **GitHub Actions**.

Local PDF RAG API [↗](#)

FastAPI, Pydantic, Ollama, ChromaDB, Uvicorn, PyPDF

- Built an **AI-powered RAG** pipeline enabling natural language querying over PDF documents, making **unstructured business data** instantly **searchable**.
- Implemented **semantic search** using vector embeddings and ChromaDB for **context-aware, keyword-free** document retrieval.
- Used locally hosted **LLMs (Ollama)** to ensure **data privacy**, suitable for **enterprises** handling sensitive documents.

Education

04/2026 – Present	Masters in Artificial Intelligence
Cottbus, Germany	<i>Brandenburgische Technische Universität Cottbus-Senftenberg</i> ↗
10/2020 – 09/2024	Masters in Data Science
Dortmund, Germany	<i>Technische Universität Dortmund</i> ↗
04/2014 – 08/2018	Bachelors in Computer Science & Engineering
Sylhet, Bangladesh	<i>Shahjalal University of Science & Technology, Bangladesh</i> ↗

Languages

English	German
B2	B1