HARSHAL VANKUDRE

AI Engineer — Agentic Systems & Production RAG | Data Science Student

Karlsruhe, Germany | +49 176 87451632 | harshalvankudre@gmail.com
harshalvankudre.com | linkedin.com/in/harshal-vankudre | github.com/HarshalVankudre

PROFILE

AI engineer who builds agentic systems and RAG applications and takes them into production. Currently researching sandboxing and isolation for unattended AI agents at Mercedes-Benz Tech Innovation. Previously sole AI developer at RÜKO Baumaschinen, shipping a RAG assistant used daily by ~50 staff and a Teams assistant covering 2,395 machines.

PROFESSIONAL EXPERIENCE

Working Student – Agentic AI Security & Research Jun 2026 – Present
Mercedes-Benz Tech Innovation GmbH | Stuttgart, Germany

- Research secure execution environments for AI agents that run unattended, covering sandboxing, isolation, and controlled access to resources
- Prototype sandbox and policy configurations and evaluate candidate agent runtimes against them, including NVIDIA OpenShell
- Document the security requirements an agent workflow must meet to run robustly and reproducibly

Working Student – AI Development Oct 2025 – Apr 2026
RÜKO GmbH Baumaschinen | Malsch, Germany

Sole developer of the company's AI solutions, from requirements analysis through to production

- Built and shipped a RAG assistant on the OpenAI API that ~50 staff now use every day; tuned retrieval and prompting against real user questions
- Built and operated the document-ingestion pipeline behind it, indexing structured and unstructured company data for vector search (Python, PostgreSQL, cloud-hosted)
- Delivered a Microsoft Teams assistant for equipment questions across 2,395 machines: a FastAPI/LangGraph orchestrator routes each one to SQL inventory lookups, Pinecone search over technical manuals, or Gemini advisory answers
- Built an AI avatar-video pipeline (Higgsfield AI) that generates listing videos for used-machine sales

Working Student – NLP & Automation Sep 2024 – Feb 2025
EnBW Energie Baden-Württemberg AG

- Co-developed an NLP customer-service chatbot and a GPT pilot that automated ~60% of tier-1 inquiries
- Automated recurring inquiry workflows and ran the supporting data analysis and reporting in HubSpot CRM and Excel

PROJECTS

WinMux — tiling terminal for agent fleets TypeScript · Electron · ConPTY
tmux-style tiling terminal for Windows that runs a fleet of parallel Claude Code sessions on real ConPTY shells; in daily use.

Ember — AI coding usage & cost tracker Rust · Tauri
Desktop widget reading local Claude Code and Codex logs for live plan headroom, session burn, and true API-equivalent cost.

StudyOS — AI-generated study workspaces Next.js · TypeScript · Prisma · Vercel AI SDK
Turns one sentence about a student's courses into a populated semester workspace: planner, assignment board, reading list.

EDUCATION

B.Sc. Data Science Mar 2026 – Present
Karlsruhe University of Applied Sciences (HKA)

- Focus areas: machine learning, statistics, data engineering, and programming

Business Information Systems – Coursework Oct 2022 – Oct 2025
Karlsruhe Institute of Technology (KIT)

- Software development, databases, business processes, and agile methods (Scrum), with Java, Python, SQL, and data analysis; transferred to the more practice-oriented Data Science program at HKA

Foundation Program – Business Track (W-Kurs) Oct 2021 – Jul 2022
Konstanz University of Applied Sciences (HTWG)

- Passed the Feststellungsprüfung (university entrance assessment): overall 2.5 | Computer Science 1.5 | English 1.3

TECHNICAL SKILLS

Agentic AI & Security	Agent Sandboxing & Isolation, Policy Design, MCP Servers, Multi-Agent Workflows
AI & LLM Development	OpenAI API, Gemini, LangGraph, RAG Architecture, Vector Search, Ollama, LLM Fine-Tuning
Software Engineering	Python, FastAPI, TypeScript, JavaScript, Next.js, React, Node.js, Java, REST APIs
Data & Databases	PostgreSQL, MySQL, Pinecone, Redis, NoSQL, Pandas, Data Analysis
Tools & Platforms	Git, GitHub, Docker, Microsoft Azure, Jira, Linux

LANGUAGES

German	Fluent (C1)
English	Full professional proficiency (near-native)
Hindi	Native