



# Dhiraj Poddar

AI Software Engineer

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## Summary

AI Software Engineer who builds **production AI platforms** – from **LangGraph** multi-agent backends and **RAG pipelines** to cloud-native deployment on **Azure**. **4+ years** across backend engineering, AI/ML systems, and cloud-native deployment. Core engineer on a production SaaS platform with agentic AI workflows.

## Professional Experience

### Full Stack AI Engineer, *Maindtec (AI Startup)*

Ingolstadt | 01/2025 – Present

- Core team building **MAiQ**, an AI SaaS platform: **FastAPI** modular monolith (DDD), **LangGraph** agentic workflows, and **Azure** cloud infrastructure with **Bicep IaC**.
- Implemented **hybrid RAG pipeline** – BM25 full-text + **pgvector** semantic search + **Cohere** reranking – with event-driven workers on **Redis Streams**, **Stripe** billing, and **SharePoint** integration.
- Led and delivered a production AI agent end-to-end in **3 months** for an external customer – designed, built, and shipped a live **API-integrated** intelligent agent.
- Built GPU-accelerated **2D technical drawing analysis** with **YOLO** object detection, Transformer OCR, and GPT vision on **AKS**.
- Implemented **multi-tenant RBAC** with SSO (**OIDC/SAML**) and **JWT**-based stateless session management for enterprise customers; enforced EU data residency compliance across all Azure regions.
- Built production observability with **Application Insights** distributed tracing, **Prometheus** metrics, **LangSmith** agent evaluation, and **PostHog** analytics; implemented health/readiness probes and zero-downtime deployments with rollback-safe **Alembic** migrations.

### Working Student AI Engineer, *Siemens AG*

Munich | 09/2024 – 12/2024

- Developed and evaluated **time series forecasting** models; assessed robustness using perturbation methods (Brownian, Gaussian noise, rotation).
- Built an interactive dashboard for **model performance monitoring** and visualization.

### Master's Thesis Student, *Siemens AG*

Munich | 03/2024 – 08/2024

- Implemented a **RAG** pipeline using **LLMs** (ChatGPT, Llama) and transformer-based models on proprietary Siemens data.
- **Published** a Python package for **text data augmentation** (synonym replacement, backtranslation, paraphrasing).

### Working Student Data Scientist, *Siemens AG*

Erlangen | 02/2023 – 02/2024

- Integrated AI models using TensorFlow and PyTorch, achieving **20%** increase in **prediction accuracy** for PCB soldering defect classification.
- Deployed ML models on Siemens infrastructure (**AI inference server, AI monitor**).

### Software Developer, *Citytech Pvt.Ltd.*

Kathmandu, Nepal | 05/2019 – 12/2020

- Developed POS mobile applications deployed across **5+ banks** in the fintech domain (Java, Kotlin).
- Built a dynamic form generation library from APIs, reducing development time by **30%**.

## Education

### Msc Data Science, *Friedrich Alexander Universität Erlangen Nürnberg*

Erlangen | 2021–2024

Relevant Courses: Artificial Intelligence, Pattern Recognition, Deep Learning, Machine Learning in Time Series, Explainable AI, Business Intelligence

### BTech Computer Science, *Maulana Azad National Institute of Technology*

Bhopal, India | 2014–2018

Relevant Courses: Data Structures and Algorithm, Data Warehousing and Mining, Digital Image Processing, NLP, Object Oriented Design and Modeling

## Skills

- **Languages:** Python, TypeScript/JavaScript, SQL, Java, Bash, Bicep
- **AI/ML:** LangGraph, LangChain, LangSmith, RAG (pgvector, Cohere), PyTorch, YOLO, Transformers, OpenCV, Multi-Agent Systems, Prompt Engineering
- **Backend:** FastAPI, SQLAlchemy, Redis, PostgreSQL, Celery, Pydantic, Alembic, Unicorn/Uvicorn
- **Payments & Auth:** Stripe, OAuth2/OIDC, SAML, JWT, RBAC, Azure AD B2C
- **Cloud & DevOps:** Azure (Container Apps, AKS, OpenAI, Key Vault, VNet, Bicep IaC), Docker, KEDA, GitHub Actions, Prometheus, Application Insights
- **Languages:** English [Business Professional], German [Intermediate – B1]