Aanand Vardhan

AI Architect | Enterprise AI Strategy & Governance

Karlsruhe, Germany | +49 1525 9311019 | aanandhhh@gmail.com | linkedin.com/in/aanand-vardhan

PROFESSIONAL SUMMARY

- Enterprise AI Architect with 8+ years building and governing production AI platforms across automotive and luxury e-commerce. Advises CIO/CTO-level stakeholders on AI strategy, platform architecture, and responsible AI governance.
- Architected an AI personalization platform serving 6M users across 14 markets on Databricks and Delta Lake, generating €750M business impact with 7× conversion uplift through privacy-compliant recommendation systems.
- Led migration from deep learning to Generative AI and LLM/RAG architectures, improving prediction accuracy from 30% to 55% while cutting model training cycles by 40%.

EXPERIENCE

Mercedes-Benz AG — Stuttgart

AI Architect | Enterprise AI Strategy & Governance — Nov 2025 – Present

- Architected and delivered a multi-agent AI platform on LangChain and Databricks (Genie, Unity Catalog, RAG graph) that unifies KPI data across sales, marketing, aftersales, and digital domains — reducing report turnaround from one week to under one minute, serving 800+ queries/day from 100+ managers and C-level executives worldwide.
- Built an enterprise knowledge base with RAG graph, onboarding 2 new business domains monthly and growing 50–100 detailed walkthroughs per topic per quarter — providing automated root cause analysis and action guidance across all registered domains.
- Designed cross-solution integration architecture connecting the platform with specialized agents (e.g., finance) for end-to-end data analysis across organizational boundaries.
- Defined enterprise AI governance frameworks, technology standards, and scalable platform patterns ensuring responsible AI adoption and regulatory compliance across all business units.

Senior ML Engineer / AI Solutions Lead — Jul 2023 – Nov 2025

- Architected the global AI personalization platform reaching 6M users monthly across 14 markets, boosting revenue by 1.1% (€750M) using LightGBM models on Databricks with embeddings stored in Redis, MLflow-based experiment tracking, and Delta Lake.
- Led migration from legacy deep learning to hybrid LLM-RAG architecture, cutting training time by 40% and lifting prediction accuracy from 30% to 55%.
- Established automated data segmentation pipelines, data quality monitoring, and metadata management using Spark and MLflow — enabling GDPR-compliant analytics across markets.
- Defined the Agentic AI strategic roadmap as company-wide AI backbone, securing stakeholder buy-in from VP and director-level decision-makers.

Smart Digital GmbH — Gerlingen

AI Solutions Consultant / Technical Lead — Jan 2023 – Jul 2023

- Advised Fortune 500 enterprises (VW, BMW, Porsche, Christie's) on AI transformation strategy, cloud-native ML deployment, and responsible AI governance as principal AI consultant.
- Delivered 72% prediction success rate and 40% CTR uplift for Christie's — their first ML-driven personalization system.
- Engineered the SmaSi (Smart Signals) AI platform, lifting recommendation accuracy by 8% via cross-dataset training and scalable ML pipeline automation.

ML Engineer (Working Student) — Aug 2020 – Dec 2022

- Built scalable data pipeline infrastructure cutting analytics turnaround from one week to days. Engineered direct CRM integration reducing feature deployment from two-week cycles to minutes.
- Designed a DQN-based personalization engine with GAN-generated synthetic data for cold-start scenarios as master thesis, improving prediction accuracy by 4%–16% across production environments.

GreenTeam eV (Formula Student) — Stuttgart

Software Engineer – Autonomous Systems & AI — Sep 2019 – Aug 2020

Built deep learning-based SLAM perception systems and deployed FPGA-driven path planning for autonomous racecars. Led real-time data processing architecture and live telemetry integration for safety-critical autonomous systems.

EDUCATION

University of Stuttgart, Germany Apr 2019 – Jan 2023
M.Sc., Autonomous Systems — Specialization: Machine Learning, Robotics, Computer Vision
Thesis: Reinforcement Learning for Enterprise Personalization (at Smart Digital GmbH)

NorthCap University, Gurgaon Aug 2014 – May 2018
B.Tech, Computer Science Engineering (Data Science)

SKILLS

AI & Machine Learning: *LLMs, Generative AI, RAG, Agentic AI, multi-agent systems, prompt engineering, embeddings, vector databases, recommender systems, deep learning, reinforcement learning, GANs, predictive analytics, knowledge graphs*
Cloud & Data Platforms: *Databricks (Unity Catalog, Delta Lake, MLflow), Azure (Synapse, Data Factory, Azure AI), AWS (SageMaker, S3, Lambda), Apache Spark, data lakehouse architecture, data pipelines, GDPR/DSGVO compliance*
Frameworks & Tools: *PyTorch, TensorFlow, Scikit-learn, LangChain, Faiss, DeepCTR, Docker, Kubernetes, CI/CD, MLflow, model lifecycle management*
Programming: *Python, SQL, Spark (PySpark), Java, C++*

CERTIFICATIONS

Databricks Generative AI Engineer Associate
Microsoft Certified: Azure AI Engineer Associate (AI-102)

LANGUAGES

English: *Native* **German:** *Business fluent* **Hindi:** *Native* **Punjabi:** *Native*

INTERESTS

Motorsport (FMSCI Entrant License, IARC autocross), football (semi-professional), basketball, music (performer at The Westin Hotel, TEDx).