

# AMNA KAUSAR

AI Engineer · Solutions Architect · ML Systems

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## PROFESSIONAL SUMMARY

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AI Engineer and Solutions Architect with 2+ years of experience designing and deploying production-grade AI systems — from multi-modal content detection platforms to therapeutic conversational agents and autonomous reasoning pipelines. Proven track record shipping real products (500+ users, 48-hour deployments) using Python, PyTorch, Hugging Face, LangChain, FastAPI, Docker, AWS, and Azure. Author of 10+ peer-reviewed publications and Best Thesis Award recipient. Adept at translating complex ML capabilities into scalable API-driven architectures and cross-functional solutions.

## TECHNICAL SKILLS

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<b>Languages</b>	Python (primary), SQL, JavaScript basics
<b>AI / ML</b>	PyTorch, TensorFlow, Hugging Face Transformers, Scikit-learn, NLP, LLMs, Computer Vision, Segmentation
<b>LLM &amp; Agents</b>	OpenAI API, DeepSeek API, LangChain, n8n, Prompt Engineering, Reasoning Agents, RAG
<b>Backend</b>	FastAPI, REST API Design, Celery, Redis
<b>Cloud &amp; Infra</b>	AWS (S3, EC2, Lambda), Azure Container Apps, Docker, Supabase, Git / DagsHub
<b>Data</b>	NumPy, Pandas, Google Earth Engine, Albumentations
<b>Practices</b>	System Architecture, ML Pipeline Design, API Integration, HIPAA-compliant data handling, Agile / Stakeholder Management

## PROFESSIONAL EXPERIENCE

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### Lead AI Engineer | [RikoLabs](#) | Remote · UAE

*Feb 2026 – Present*

- Architected and led end-to-end development of KayAI, a HIPAA-compliant therapeutic conversational AI system for Kindpath, enabling guided emotional de-escalation interventions at scale.
- Designed full AI system architecture and MVP using AWS, LLM-based tooling, and psychology-informed intervention frameworks.
- Defined and built REST APIs for mobile integration, collaborating with cross-functional engineering and product teams.
- Conducted weekly technical reviews and stakeholder updates, aligning product roadmap with engineering execution.

### Founding AI Engineer | [WeCatchAI](#) | Remote · USA

*Sep 2025 – Feb 2026*

- Built and shipped a multi-modal AI-generated content detection system achieving 90% accuracy, adopted by 500+ users.
- Developed containerized FastAPI inference services using Docker, PyTorch, and Hugging Face; deployed on Azure Container Apps.
- Optimized system latency and throughput via Celery + Redis for parallel inference and token usage reduction.
- Contributed to system architecture decisions, evaluation pipeline design, and early-stage product adoption strategy.

### AI Engineer | [MentalWealthAcademy](#) | Remote · USA

*May 2025 – Sep 2025*

- Built a governance-based reasoning agent (AzuraOS) using DeepSeek API, n8n, and Supabase for structured decision workflows.

- Deployed agent into a blockchain-based Farcaster mini-app, reaching 256 users within 48 hours of launch.
- Collaborated directly with the product founder on model design, alignment, and real-world deployment strategy.

### Junior ML Engineer | [Omdena](#) | Trieste, Italy

Jan 2024 – Jul 2024

- Processed Sentinel-2 satellite imagery for seagrass mapping using Google Earth Engine and Albumentations.
- Trained a UNet segmentation model in TensorFlow, achieving 81.2% mean Dice score for environmental monitoring.
- Built version-controlled, collaborative ML pipelines using DagsHub and Git.

### AI Solutions Intern | [ECode Networks](#) | India

Feb 2024 – Sep 2024

- Developed a Flutter + Firebase logistics tracking app, automating vendor data workflows end-to-end.
- Researched transformer-based LLM architectures and contributed to internal technical documentation.
- Automated sponsor tracking workflows using Python in AWS-based environments.

## FEATURED PROJECTS

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### KayAI — Therapeutic Conversational AI [kindpath.health/kay-ai](https://kindpath.health/kay-ai)

Production-deployed conversational AI system for guided therapeutic interventions. HIPAA-compliant, AWS-hosted, with LLM-based intervention flows.

### WeCatchAI Content Detector [wecatchai.com](https://wecatchai.com)

Multi-modal AI detection system (90% accuracy, 500+ users). FastAPI + Docker + Azure Container Apps stack.

### Seagrass Mapping with Computer Vision [DagsHub](#)

UNet segmentation on Sentinel-2 satellite imagery for environmental monitoring. 81.2% mean Dice score.

## PUBLICATIONS (10+ TOTAL)

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- Kausar, A., et al. (2026). "How Does AI 'Think'?" In Encyclopedia of Modern Artificial Intelligence. IGI Global. doi:10.4018/403117
- Kausar, A., et al. (2026). "Artificial Intelligence in Gestational Diabetes Mellitus." In ICCAML 2024, CCIS Vol. 2538. Springer. doi:10.1007/978-3-031-98138-8\_10

Full publication list: [orcid.org/0009-0000-3940-8845](https://orcid.org/0009-0000-3940-8845)

## EDUCATION

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### B.Tech in Computer Engineering — Specialisation in AI, Minor in Robotics

2021 – 2025

Ajeenkya DY Patil University · **Best Thesis Award — AI-Driven Gestational Diabetes Detection System**