

Mehedi Khan | AI & Backend Engineer

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Professional Summary

Software engineer with **3+ years of shipping production software** for teams in the US, Germany and Bangladesh. My work spans AI systems (LLM and RAG), distributed systems, microservices and cloud infrastructure. Notably, I led the backend and infrastructure for [Netra News](#)' live election monitor, which served **~8M requests with 100% uptime**. I care most about **applied AI and distributed systems**.

Technical Skills

Languages: Python, Go, TypeScript, JavaScript, Java, C, C++

Backend: Distributed Systems, Microservices, FastAPI, Django REST Framework, Spring Boot, REST, gRPC

AI / ML: PyTorch, TensorFlow, scikit-learn, NumPy, Pandas, LLMs, RAG, Multimodal AI

Data & Cloud: PostgreSQL, MySQL, Redis, AWS, DigitalOcean, Kubernetes, Docker, Terraform, Cloudflare

Frontend & Tools: React, Next.js, Tailwind CSS, GitHub Actions, Git, Postman

Professional Experience

[CreateBud, Inc.](#), **AI Engineer (Part-time) Remote** | Apr 2026 – Aug 2026

- Joined a funded US startup part-time to help build its **AI-literacy residency program** for high school students

[Systemica Institut](#), **Backend Engineer, Ulm, Germany (Remote)** | Dec 2024 – Jul 2025

- Designed and maintained a **file-processing API** in Python and FastAPI for a German psychiatry-training institute
- Reworked its **architecture** around clear design principles and added **end-to-end tests** to help it scale ([design doc](#))

Contract Software Engineer, Remote | 2023 – Present

- **Netra News:** led systems, backend and infra for a live monitor of Bangladesh's 2026 national election, covering ~43,000 polling stations. It served **~8M requests with 100% uptime** on about **\$335** of infrastructure ([blog](#))
- Kept it cheap with a static **Next.js** site, rebuilt by webhooks as results came in, on **FastAPI** and **PostgreSQL**
- Ran it all on **DigitalOcean Kubernetes** behind **Cloudflare**, using Tunnels in place of a load balancer
- Before that, owned [ChaarChakka](#)'s marketplace backend (Django REST) and built for clients like [Rantir](#)

Open Source Contributor, GitHub | 2023 – 2024

- Got a **pull request merged** into [Plone](#), the open-source enterprise CMS

Awards & Achievements

- **IEEE ICIP 2025 VIP Cup, Champions:** beat 40+ teams worldwide with real-time RGB + IR drone detection
- **AI Engineering Hackathon 2025, Champions:** beat 86 teams; our [multilingual search](#) ran in **500 ms on CPU**
- **Therap JavaFest 2024, Top 10 Finalist:** out of 1,300+ participants, with a [Spring Boot mentorship platform](#)

Research Experience

[SysModeler.ai](#), **Research Assistant, Canton, MI, USA (Remote)** | Nov 2025 – Feb 2026

- Explored open problems in **Model-Based Systems Engineering**, using AI to generate SysML models

Publications

- [Attributable Post-Rationalization in RAG Citations: A Controlled Reproduction and an RLVR Comparison](#). **M. Khan**, M. S. I. Bhuyan. *arXiv*, 2026
- [Real-Time Multimodal Drone Detection, Tracking and Payload Classification](#). **M. Khan** et al. *IEEE ICIP 2025 VIP Cup (Champions)*

Education

[Bangladesh University of Engineering and Technology \(BUET\)](#), Dhaka, Bangladesh

B.Sc. Engg. in Computer Science and Engineering, Nov 2022 – May 2027 (expected)

Notable Courses: Machine Learning, AI, Operating Systems, Networks, Databases, Data Structures & Algorithms

Other Courses: Harvard [CS50x](#), [CS50W](#), [CS50AI](#)

Leadership: Vice Chairperson (Technical), IEEE Computer Society BUET Student Branch Chapter