

Adnan Ahmed Khan

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PROFILE

Full-Stack & Mobile Lead with a strong focus on distributed systems and high-performance backend engineering. Proven record of transforming monolithic architectures for horizontal scalability and reducing critical API latency by **95–96%**. Skilled at leading cross-functional teams, modernizing CI/CD pipelines, and delivering production-grade cloud infrastructures.

WORK EXPERIENCE

HackOnTech

Islamabad, Pakistan

Team Lead

Sep 2024 – Present

- Lead a cross-functional team of **7 developers**, driving sprint planning, architectural decision-making, and delivery of high-impact features.
- Modernized CI/CD pipelines to support **daily deployments**, reducing build times and improving release velocity.
- Reduced production hotfix frequency by establishing automated testing, static analysis, and strict code review standards.
- Mentor junior engineers in clean architecture and distributed-system thinking, improving team output consistency.

Full Stack Developer

Apr 2023 – Present

- Built a dynamic **Node.js query builder** that reduced critical API latency from 30s+ timeouts to **<1s** by eliminating redundant joins and optimizing GROUP BY operations.
- Re-architected a monolithic backend into **stateless, horizontally scalable** services capable of handling millions of records post-launch.
- Engineered modules for **PDF transformation**, geometric calculations, and multi-thousand-row dataset processing using Sequelize.
- Designed meteorological visualization dashboards using **deck.gl** and implemented hardened API security with **JWT** and layered validation.

Tech: TypeScript, Node.js, Nest.js, Postgres, Neo4j, Redis, Docker, CI/CD, Firebase, GraphQL, Python.

GeekGenix

Islamabad, Pakistan

Backend Developer

Dec 2020 – Feb 2021

- Integrated **Stripe** for secure payments and connected endpoints seamlessly with a React frontend.
- Implemented authentication using **Passport.js** and strengthened reliability through Jest-based unit testing.
- Designed RESTful APIs with Express.js & MongoDB to support dynamic customer workflows.

Tech: Node.js, Express.js, MongoDB, React, Passport.js, Stripe API, Jest.

EDUCATION

BS Computer Science

Sep 2018 – Feb 2023

PMAS Arid Agriculture University, Rawalpindi


FSc Pre-Engineering

Mar 2016 – Mar 2018

Islamabad College for Boys, Islamabad

PROJECTS

Vidx


 | May 2025 – Oct 2025

- Architected a distributed video-rendering platform using **FastAPI** and **React**, supporting 50+ cinematic transitions.
- Built a non-blocking parallel pipeline using **RabbitMQ + Celery**, dynamically scaling workers based on CPU/GPU availability.

- Compiled a custom **FFmpeg** build with GL-Transitions to enable **4K rendering** while reducing memory overhead.

Tech: FastAPI, React, RabbitMQ, Celery, Docker, MongoDB, Traefik, FFmpeg.


Crackq.me

 | Feb 2023 – Dec 2023

- Built a SaaS platform for distributed cryptographic hash cracking using **Next.js** and containerized workers.
- Leveraged **Fitcrack (BOINC)** to orchestrate a global grid of GPU nodes, enabling on-demand scaling without downtime.

Tech: Next.js, TypeScript, Docker, Hashcat, Fitcrack/BOINC.

pdf-annotate.js

 | Mar 2024 – Apr 2024

- Added a remote StoreAdapter enabling **real-time annotation sync** with a central API.
- Optimized SVG/TypeScript rendering logic to prevent annotation overlap and improve interactive performance.

Tech: PDF.js, TypeScript, SVG.