

Usman Tahir

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Backend Engineer

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SKILLS

- **Languages:** Typescript, Go, Python, SQL, Javascript
- **Cloud:** AWS CDK (IaC), AWS EC2, AWS SNS, AWS RDS, AWS SES, AWS Cognito, AWS Lambda, Amplify
- **Database:** PostgreSQL, MySQL, MongoDB, Redis,
- **Other Technologies:** GraphQL, Docker, Kubernetes, Prometheus, Grafana, Firebase, Next.js, Vercel AI SDK, Puppeteer, Jest, Github CI/CD

EXPERIENCE

- **Antematter** Islamabad, PK
Backend Engineer November 2023 - Present
 - Lead a team of 5 engineers in the design and implementation of an Infrastructure as a Service (IaaS) platform.
 - Migrated the project's AWS Lambda infrastructure to Infrastructure as Code (IaC) using the AWS Cloud Development Kit (CDK), achieving a 90% reduction in deployment and update times.
 - Developed a high-performance crypto data scraper, reducing data latency by over 97% (from 37s to 1s) to enable real-time market analysis.
 - Built a real-time data analyst agent chatbot (Vercel AI SDK, Google Gemini API) with specialized agents for query, evaluation, summarization, and response generation, cutting token consumption by 90% and delivering immediate marketing insights and significantly improving cost-efficiency.
 - Architected a high-volume notification service using AWS SNS to achieve a daily capacity of 50,000 emails and 10,000 SMS.
 - Implemented a resilient delivery system with retry mechanisms using AWS SQS and automated email bounce handling via PostgreSQL triggers to maintain domain reputation and maximize deliverability.
 - Set up an automated testing pipeline with 100% code coverage for user onboarding flows using Puppeteer and Jest
 - Worked on automating the company's hiring pipeline, significantly increasing response rates to applications.
 - Developed end-to-end CI/CD pipelines with GitHub Actions to build, test, and deploy containerized applications (Docker, Docker Compose) across multiple environments.
 - Set up Grafana dashboards with Prometheus for monitoring and alerting on critical metrics.
 - Built and managed GraphQL APIs on Hasura Cloud, leveraging dynamic queries, role-based access control, and Postgres relationships to deliver low-latency, real-time data access for client applications.
 - Designed and implemented scalable backend systems in Go and TypeScript (Express).
- **MACHINE VISION AND INTELLIGENT SYSTEMS LABS** Islamabad, PK
Research Associate FEB 2023 - July 2023
 - Designed and implemented the backend architecture for an IOT enabled water quality monitoring system in Javascript (Express).
 - Implemented role based user authentication and authorization using JWT.
 - Developed a real-time web dashboard (React) to visualize incoming remote sensor readings, facilitating comprehensive water quality analysis and alerts.

CERTIFICATIONS

- **Coursera Deep Learning Specialization** 2023
Coursera
- **Node.js, Express, MongoDB & More: The Complete Bootcamp 2023** 2023
Udemy

EDUCATION

- **National University of Sciences and Technology (NUST)** Islamabad, PK
Bachelors of Science in Computer Science
2019 – 2023