MA

MUHAMMAD ARSLAN

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Programming Languages / Tools

TypeScript, Python, Rust, NodeJS, JavaScript, GraphQL, Git, AWS, SQL, MongoDB, Stripe, OpenTelemetry, LangChain, Kubernetes

Professional Summary

Software developer with experience building backend systems, APIs, and infrastructure across TypeScript, Node.js, Python, and Rust. Worked on billing systems, deployment pipelines, observability tooling, and AI agent platforms built on LangChain and deepagents, deployed on AWS and Kubernetes.

Work Experience

Software Developer — May 2022 – Present

Fleek: Developer Platform for AI Agents & Static Sites, USA (Remote)

- **Billing Infrastructure:** Built a Stripe billing system supporting flat-rate subscriptions and metered usage based on tracked bandwidth, storage, and LLM consumption, integrated with usage metrics for accurate invoicing.
- **Static Site Deployments:** Built Git integration for a site hosting platform on Node.js, AWS Lambda, GraphQL, SQL, and Step Functions, with infrastructure managed via AWS CDK. Deployments were triggered by Git webhooks to automate builds and publish to IPFS.
- **Usage Analytics:** Set up OpenTelemetry Collector infrastructure with SigNoz to track per-project usage for internal dashboards and billing.

Nephew, Autonomous Storefront Assistant for SMBs

- **Voice & Conversational Interface:** Built the AI receptionist system using Pipecat and GPT Realtime to handle inbound voice calls, SMS, and website widget interactions for local businesses, powering reliable, real-time appointment booking integrated with external CRM systems.
- **Billing Infrastructure:** Built an automated usage billing engine integrated with Stripe and Linq, featuring dual-bucket credit accounting for LLM and media usage, pre-run credit guards, and idempotent webhook processing with auto-refill rules.

Software Developer — Sep 2020 – Apr 2022

OXD Consulting Ltd., Vancouver, BC, Canada

- **Industrial Analytics Platform:** Contributed to the backend of an analytics product for monitoring industrial paper machines. Built using Node.js and MongoDB, the system processed sensor data collected from flat sheet machines to provide real-time performance insights.
- **Alerting & KPI Monitoring:** Designed and implemented a monitoring system to track performance metrics and trigger alerts when thresholds were breached. Used Python to process time-series sensor data for alerting and to model expected performance trends, enabling faster operational response.
- **Data Migration:** Developed a flexible MongoDB migration tool to support evolving data schemas while preserving backward compatibility and ensuring stable rollout of new features.
- **Agile Development & Code Quality:** Actively participated in sprint planning, collaborated with designers, and stakeholders, and followed best practices to maintain a reliable and maintainable codebase.

Education

BSc. in Computing Science — Jan 2017 – Dec 2020

Simon Fraser University – Burnaby, BC, Canada

- Dean's Honour Roll, Faculty of Applied Sciences, Fall 2019 & Fall 2020

Interests and Hobbies

- Sports: Cricket, Badminton, Table Tennis, Gym; Reading: sports, politics or technology.