

MURTAZA ASGHAR

Senior Full Stack Engineer

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PROFESSIONAL SUMMARY

Senior full stack engineer with 7+ years of experience building TypeScript products end to end, from React and Next.js frontends to Node.js services and AWS infrastructure. Built streaming, real-time, recommendation and billing systems for a virtual concert platform, with earlier products in lead generation, influencer marketing and IoT. Leads a seven-person engineering team at Moshpit.

PROFESSIONAL EXPERIENCE

Moshpit | Senior Software Engineer (Full Stack)

August 2022 - Present | Lahore, Pakistan

Platform for virtual concerts, virtual production and immersive 3D content creation.

- Leading and mentoring a seven-person engineering team through system design, technical architecture decisions and project delivery across web and backend services.
- Architected the multi-step artist onboarding flow end to end, from Next.js screens with React Hook Form and Zod validation to Node.js profile verification services, reducing onboarding drop-off by 40%.
- Designed backend services in Node.js, TypeScript, NestJS and MongoDB for concert publishing, bookings, creator workflows and subscription management.
- Built an AWS video-on-demand pipeline with MediaConvert adaptive bitrate transcoding, S3 storage and CloudFront delivery, plus EventBridge job tracking and Rekognition content moderation.
- Engineered the concert viewer for live and pre-recorded shows with Unreal Engine Pixel Streaming over WebRTC and HLS.js adaptive playback; added immersive 3D scenes with React Three Fiber and GSAP.
- Developed real-time chat, reactions and private co-watching sessions with Socket.io and Redis Pub/Sub across multiple Node.js instances, with optimistic React updates keeping message latency under 200 ms.
- Built personalized concert recommendations end to end with Amazon SQS, AWS Lambda, Amazon Personalize and ElastiCache for Redis behind API Gateway; React rails increased average session duration by 35%.
- Implemented Stripe billing for subscriptions, pay-per-show tickets and creator credits, from payment webhooks, trials, plan changes and cancellations to Next.js checkout flows with entitlement checks in Server Actions.
- Migrated the audience web app to Next.js App Router, React 19 and Server Components with a shared Tailwind CSS and shadcn/ui design system in a Turborepo monorepo, bringing mobile LCP under 2.5 s.
- Provisioned AWS infrastructure as code with AWS CDK and CloudFormation, defining Lambda, API Gateway, S3, CloudFront, SQS and ElastiCache stacks for staging and production.
- Set up production monitoring with centralized ELK logging, Sentry error tracking, Grafana dashboards and CloudWatch alerts routed to Slack and Jira, cutting incident diagnosis time from hours to minutes.

Mifu | Software Engineer (Full Stack)

March 2022 - April 2024 | UK, Remote | Part-time

Influencer marketing platform connecting brands with creators and managing campaign delivery.

- Architected a serverless backend on AWS Lambda, API Gateway and DynamoDB, deployed with AWS Amplify, for creator onboarding and campaign workflows.
- Designed a single-table DynamoDB data model with composite keys and global secondary indexes to serve campaign access patterns and cross-campaign queries.

- Implemented creator registration and authentication with Amazon Cognito, plus REST APIs for campaign listings, social-account linking and offer acceptance.
- Delivered the React 18 and TypeScript web app, including a multi-step campaign builder, content review screens and analytics dashboards, with live updates through AWS AppSync GraphQL subscriptions.

ScraperSpot | Software Engineer (Full Stack)

March 2021 - November 2022 | USA, Remote

Lead-generation and data-extraction products for real estate professionals.

- Led architecture for four lead-generation web apps for real estate agents, pairing Next.js, React and TypeScript frontends with Node.js, Express and PostgreSQL APIs.
- Moved long-running extraction jobs out of the API request cycle with BullMQ and Redis queues, running the API and scraping workers as separate services on Railway and GCP.
- Increased data extraction speed by 64% with concurrent workers, connection reuse and batched database writes; retries with exponential backoff and per-source rate limits cut failed jobs by about half.
- Shipped subscription and pay-as-you-go billing with Stripe, from payment webhooks and plan-based extraction limits to pricing and checkout pages, contributing to over \$30,000 in added monthly revenue.

BlueEast | Software Engineer (Full Stack)

May 2019 - March 2021 | Lahore, Pakistan

Mevris smart-home platform, developed with Orient, for appliance control, energy monitoring and home automation.

- Developed React and React Native screens for the Mevris app, covering user and appliance onboarding, device control, Google Assistant linking, energy metering, timelines and reports.
- Delivered GraphQL APIs and subscriptions on an MQTT and AWS Lambda device backend, streaming real-time telemetry, sensor readings and device status to Apollo Client live charts for 1,200+ active users.
- Created the Auto-Pilot UI, giving one-tap access to five AI-driven energy-saving modes (Max BTU, Differential, Balanced, Round Robin, Incremental) with live mode feedback over GraphQL.
- Wrote 200+ unit and integration tests with Jest and React Testing Library across the shared web, mobile and desktop codebase.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, SQL, HTML5, CSS3

Frontend: React 19, Next.js App Router, React Server Components, React Native, TanStack Query, Zustand, Redux Toolkit, React Hook Form, Zod, Tailwind CSS, shadcn/ui, Storybook, Apollo Client, WebRTC

Backend & APIs: Node.js, NestJS, Express.js, Hono, REST APIs, GraphQL, WebSockets, Socket.io

Architecture: System design, event-driven architecture, serverless, microservices, real-time systems

Databases & queues: PostgreSQL, MongoDB, DynamoDB, Redis, ElastiCache, Drizzle ORM, BullMQ

AWS: AWS Lambda, API Gateway, Amazon S3, Amazon SQS, CloudFront, MediaConvert, Rekognition, Amazon Personalize, EventBridge, ECS Fargate, Cognito, Amplify, AppSync, AWS CDK, CloudFormation

Edge & platforms: Cloudflare Workers, Workers KV, R2, Vercel, Railway, GCP, Supabase, Neon, Convex

DevOps & testing: Git, Docker, GitHub Actions, CI/CD, Vitest, Jest, React Testing Library, Playwright

Monitoring & integrations: Sentry, Grafana, ELK stack, CloudWatch, Stripe

AI development: LangChain, LangGraph, Vercel AI SDK, OpenAI API

AI coding tools: Claude Code, OpenAI Codex, custom skills and workflows

EDUCATION

Bachelor of Computer Science (BCS)

COMSATS University Islamabad | Islamabad, Pakistan