

Muhammad Asad

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Senior Full-Stack Developer with 8+ years of experience building and scaling SaaS platforms using MERN and MEAN stacks on AWS. Expertise in Node.js, NestJS, React, Angular, microservices, event-driven architectures, and serverless solutions. Proven track record of reducing API latency by up to 45%, cutting backend development effort by 40%, and executing zero-downtime migrations for systems serving 12M+ users.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript

Backend: Node.js, NestJS, Express.js, REST APIs, GraphQL

Frontend: React, Angular, Redux, NgRx, RxJS, HTML5, CSS3, Tailwind CSS, Bootstrap

Databases: MongoDB, PostgreSQL, MySQL, MSSQL, Redis

Cloud & DevOps: AWS (Lambda, S3, EventBridge, EC2, IAM, SQS, SNS, RDS), Docker, Kubernetes, CI/CD

Architecture: Microservices, Distributed System, Event-Driven Architecture, CQRS, API Gateway, System Design

Testing: Jest, Cypress, Unit Testing, Integration Testing, TDD | BDD Practices

Tools: Git, GitHub Actions, Jenkins, Bitbucket, Jira, Swagger, OpenAPI, PM2

EXPERIENCE

Biztree

Jan 2023 – Present

Senior Software Engineer

Remote

- Architected a unified NestJS microservices backend powering 5+ SaaS applications, serving 12M+ users, reducing backend development effort by 40%.
- Built the CloudDrive platform (NestJS, MongoDB) supporting 500K daily file operations with secure access (RBAC), S3 presigned URLs and thumbnail generation via AWS Lambda.
- Led a large-scale MongoDB V1 to V2 migration (50M+ records) with zero downtime by designing safe batch processing, validation, and rollback strategies.
- Implemented a distributed queue system using BullMQ and RabbitMQ to offload heavy asynchronous workloads, reducing API latency by 45% and improving system scalability.
- Built HRM backend (NestJS, PostgreSQL, TypeORM) including timesheets, payroll logic, audit logs using CQRS-based architecture, and queue workers for scheduled jobs.
- Developed an AI middleware layer for 12M+ users to power document workflows and chat features, centralizing token usage tracking, subscription enforcement, and file integration with S3.
- Applied event-driven workflows using AWS EventBridge, streaming detailed file activity events and triggering real-time notification logic for collaboration features.
- Containerized services with Docker and production-ready deployments, introducing structured logging, centralized error handling, Swagger API documentation, and integration testing with Jest integrated into CI pipelines.

InvoZone

Oct 2021 – Jan 2023

Senior Software Engineer

- Delivered an enterprise Privileged Access Management (PAM) platform (credential management, session recording, key & certificate management) used by security teams for sensitive infrastructure access.
- Designed and implemented a scalable microservices architecture with load balancing and multi-instance clustering, enabling high availability and reliable performance in enterprise environments.
- Modernized legacy modules by migrating to modular, service-oriented components and integrating third-party systems, reducing technical debt and improving deployment speed by 30%.
- Built session forensics and audit capabilities (keystroke and video recording), enhancing traceability, compliance, and incident investigation workflows.

- Strengthened application and API security by implementing protections against XSS, SQL injection, directory traversal, and brute-force attacks, improving overall system resilience.
- Contributed to product enhancements that supported RevBits PAM winning Gold in the 2022 Globee Awards, improving competitiveness against established security platforms.

TenX **Aug 2018 – Oct 2021**

Software Engineer

- Developed full-stack application for Ancera (microbial risk assessment), enabling automated detection pipelines that reduced processing time by 50% for enterprise use.
- Engineered and optimized distributed, resource-intensive systems for scientific data processing, improving throughput and fault tolerance for large batch analytics.
- Optimized software delivery lifecycles by implementing automated CI/CD pipelines, and end-to-end testing workflows achieving a 2x increase in release frequency and a 30% reduction in environment-related downtime.
- Reengineered internal NPM packages and front-end components to optimize performance and developer productivity across teams.
- Collaborated on a data-driven sports analytics platform (Arccos Golf), contributing to features that improved shot strategy outcomes by 40% and ranked #3 in sports innovation.
- Partnered with product and engineering teams in Agile environments to translate business requirements into scalable technical solutions and deliver MVP features on schedule.

EDUCATION

National University of Computer and Emerging Sciences (FAST-NUCES)

Bachelor of Science in Computer Science

2014 – 2018

CERTIFICATIONS

AWS Certified Developer Associate — Amazon Web Services