

YASH SHAH

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PROFESSIONAL SUMMARY

AI-first Staff Software Engineer with 11+ years of experience architecting cloud-native distributed systems, platform engineering solutions, and developer productivity infrastructure. Specialized in building enterprise-grade AI automation platforms, agentic workflows, and Model Context Protocol (MCP) ecosystems integrated with robust .NET, AWS, and Kubernetes backends. Proven track record of scaling high-throughput, event-driven architectures while pioneering modern, AI-assisted engineering practices that measurably accelerate the SDLC across fintech and enterprise SaaS domains.

TECHNICAL SKILLS

AI Engineering & Agents: Model Context Protocol (MCP) Server Development, Agentic Workflows (A2A Protocol), Semantic Routing, Vector Databases, Local Hugging Face Models, Prompt Engineering, CrewAI.

Backend & Distributed Systems: C#, .NET 8, ASP.NET Core, Event-Driven Architecture, Microservices, RESTful APIs, RabbitMQ, SQL Server, C++, LINQ.

Cloud, DevOps & Platforms: AWS (Lambda, EKS, ECS Fargate, DynamoDB, SQS, SNS, API Gateway), Kubernetes, Terraform, Infrastructure as Code (IaC), CI/CD (Jenkins), Docker.

Data, Observability & UI: PostgreSQL, Elasticsearch, DynamoDB Streams, Grafana, Prometheus, AWS X-Ray, CloudWatch, Blazor WebAssembly (WASM), TypeScript.

ACHIEVEMENTS & CERTIFICATIONS

- **AWS Certified Solutions Architect** – Associate
- **HashiCorp Certified Terraform Associate**
- **Microsoft Certified C# Developer**
- **Certified Scrum Master (CSM)** – Scrum Alliance
- **Winner – Morningstar Hackathon:** Built predictive ML models to extract and generate financial insights from large-scale market datasets.

PROFESSIONAL EXPERIENCE

Staff Software Engineer • Chamberlain Group

Sept 2025 – Present | Hoffman Estates, IL

AI Platform Engineering & DevEx Automation

- Architected an intelligent, production-triage agentic workflow using an ecosystem of custom MCP servers, autonomous agents, and Vector Databases; automated log anomaly detection via Grafana, root-cause code isolation, and automated draft PR generation.
- Designed and deployed a suite of production-grade MCP servers that exposed internal corporate data structures, automated end-to-end unit/automation testing, and scaffolded boilerplate API endpoints, drastically reducing developer bootstrapping time.
- Engineered autonomous backend agents capable of executing complex, multi-step developer tasks, including full CRUD microservice generation and API protocol compliance verification.
- Prototyped locally hosted Hugging Face LLM models within air-gapped environments, establishing a secure blueprint for enterprise-grade AI automation without exposing proprietary codebases to third-party APIs.
- Established internal AI engineering standards, mentoring 15+ engineers on prompt engineering, MCP server development, and agentic workflows to drive org-wide adoption of AI-first engineering practices.

Distributed Systems & Cloud Architecture

- Led the architectural design and scaling of the distributed backend systems powering *Amazon Key In-Garage Delivery* within the high-volume MyQ ecosystem using .NET 8, Kubernetes (EKS), and AWS.
- Optimized event-driven microservices handling massive telemetry ingestion, near-real-time device communications, and critical access-authorization workflows across millions of connected IoT devices.
- Built and maintained highly available REST APIs and partner integration points, consistently meeting strict SLA/uptime requirements for external enterprise ecosystems.

Lead Software Engineer • Morningstar

June 2022 – Sept 2025 | Chicago, IL

- Architected and executed cloud migration of on-premises investment management applications to AWS (.NET Core, ECS, RDS, CloudWatch, X-Ray), eliminating over \$1M in annual server and licensing costs.
- Integrated a third-party financial vendor API into Morningstar's internal platform, reducing operational overhead by \$300K annually by streamlining account-to-user assignment workflows across financial operations teams.
- Designed scalable, event-driven microservice architectures using SQS, SNS, S3, Lambda, and Terraform, automating infrastructure provisioning and cutting deployment time by 50%.
- Led cross-team resolution of a large-scale historical investment data inconsistency affecting client trust; coordinated technical workshops, defined remediation milestones, and restored data integrity across affected downstream platforms.
- Built an ElasticSearch index backed by DynamoDB Streams and PostgreSQL to resolve critical query performance bottlenecks, surfaced via a .NET Core API with auto-refresh logic and stale-data cleanup.
- Delivered a Blazor WASM investment data UI serving refreshed portfolio data to third-party investment platforms in near real time.
- Managed and mentored a team of 3–5 engineers, leading sprint planning, architecture reviews, and cross-location project delivery using Agile principles.

Senior Software Engineer • Morningstar

Jan 2021 – June 2022 | Chicago, IL

- Designed and implemented a serverless fan-out onboarding architecture using SNS, SQS, SES, Lambda, and API Gateway to safely onboard 200K+ users, eliminating manual provisioning bottlenecks.
- Automated AWS infrastructure provisioning with Terraform across multiple environments, reducing deployment times by 50% and enabling self-service infrastructure for engineering teams.
- Built and maintained high-performance investment management APIs using .NET Core, Entity Framework Core, PostgreSQL, and DynamoDB to serve real-time financial data.
- Implemented ML-driven client retention insights using ML.NET, applying finance domain knowledge to identify at-risk investment accounts earlier and reducing churn by 30%.

Technical Consultant • Kin + Carta Create

Feb 2020 – Jan 2021 | Chicago, IL

- Designed and implemented enterprise-grade microservices, improving system modularity and scalability using C#, .NET Core, SQL Server, ECS Fargate, ALB, and CloudFront.
- Held technical workshops and advised enterprise clients on cloud adoption strategies, optimizing infrastructure footprints with AWS and Terraform.
- Built secure OAuth and JWT-based authentication workflows to enhance multi-tenant data protection.

Software Engineer • Relativity

Jan 2019 – Jan 2020 | Chicago, IL

- Developed and maintained e-discovery enterprise solutions, streamlining legal tech workflows using C#, .NET Core, SQL Server, TypeScript, and C++.
- Enhanced and monitored CI/CD pipelines using Jenkins, reducing release cycles by 40%.

.NET Application Developer • Apex Analytix

Mar 2016 – Dec 2018 | Greensboro, NC

- Developed enterprise financial supply chain applications using ASP.NET MVC, C#, SQL Server, Entity Framework, and Web API.
- Implemented enterprise Single Sign-On (SSO) authentication workflows using Identity Provider integrations.

Software Developer Intern • Coyote Logistics

Jun 2015 – Aug 2015 | Chicago, IL

- Developed an Elasticsearch-powered search platform enabling rapid full-text search across large enterprise reporting sets.

Early Career Experience • IBM India & Blue-tech

2013 – 2014 | International

- **Software Developer / Database Support:** Maintained ERP desktop applications (C#, SQL Server, ADO.NET) for manufacturing workflows and generated operational reports for high-volume telecom customer platforms.

EDUCATION

Master of Science in Finance • University of Illinois Springfield

Aug 2023 – Dec 2025

Master of Science in Information Technology • Loyola University Chicago

Aug 2014 – Dec 2015

Bachelor of Engineering in Information Technology • Gogte Institute of Technology

Aug 2009 – Aug 2013