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arjunswaj

Arjun Shekar Bharadwaj

Software engineer with 10+ years across distributed systems, data pipelines, and full-stack tooling on AWS and Azure.

Experience

2024–Present **Senior Software Engineer**, *Microsoft Azure*, Mountain View

Sr. Software engineer specializing in cloud-native compute platforms and streaming data architectures, building *scalable, fault-tolerant solutions* for batch and streaming workloads using Kubernetes, Apache Airflow, and open-source technologies within the Azure Resource Builder team.

- Architected multi-tenant compute platform for streaming/batch workloads on Kubernetes and Airflow with RisingWave/Spark/Flink, integrating Event Hubs (Kafka) and Storage Accounts for predictable throughput and multi-region durability
- Built containerized runtime with dynamic NuGet management for *zero-downtime rollouts* and storage-backed artifact delivery across regions; championed AI tooling (MCP servers, SWE Agents, custom prompts) to accelerate developer workflows

2015–2024 **Software Development Engineer**, *Amazon*, Sunnyvale/Bengaluru

Built large-scale distributed services, data pipelines, and full-stack portals across Alexa targeting and Seller platforms using Java/Python services and frontend frameworks.

- Architected *AI-powered platform* (MCP Server) with Java/Python services for Alexa+, enabling optimal device targeting across Music/News/Video and supporting millions of daily interactions
- Re-architected targeting services with strategy pattern and CHRS caching, cutting external reads ˜50% per request, improving latency/IOPs/cost; designed analytics schema and onboarded Endpoint Target Determination v2 to Datamart while keeping payloads under 10 MB
- Led *20+ stakeholder* Vega OS launch; validated capability routing and load-tested storage/telemetry paths to avoid latency regressions before global dial-up
- Built seller onboarding and tax-compliance portals (Angular) plus invoice pipeline using AWS SQS fan-out, encrypted PDFs to S3, and pooled SFTP to Deutsche Bank, stabilizing cross-border delivery despite flaky links

Hobbyist Projects

2024–Present **Hobbyist Full Stack Developer**, *Generative Music Platform*

Developed a full-stack generative music platform for Indian classical music (Raagas) using algorithmic composition.

- Frontend & Realtime UX (React 19, Node.js, MUI, Tone.js): Built responsive UI with WebSocket playback; functional patterns (Monet.js) for resilient state
- Backend & Music Generation (Haskell): Engineered Markov Chain composition in *Euterpea* with gRPC/WebSocket services for low-latency streaming
- Performance & Caching: Added Redis caching with tuned TTLs, cutting repeat recommendation load by 80%+
- Infrastructure (AKS, Helm/Bicep, Docker): Shipped multi-service deployment with CI/CD and TLS-terminated gateway

Education

2013–2015 **Master of Technology (M.Tech)**, *IIIT-B*, India, *CGPA: 3.70/4.00*
Major: Information Technology

2007–2011 **Bachelor of Engineering (B.E)**, *RVCE*, India, *CGPA: 9.00/10.00*
Major: Computer Science and Engineering

Skills

Languages	Java, JavaScript, Python, C#, Haskell
Cloud Platforms	AWS (SQS, SNS, Lambda, DynamoDB, Athena), Azure (Event Hubs, Storage Accounts, Container Apps)
Container & Orchestration	Kubernetes, Docker, Azure Container Registry; Helm, Bicep; rollout strategies for stateful services
Frameworks & APIs	Spring, Coral, AUI, Angular, React, Node.js/Express, REST, Proto + gRPC
Storage & Data	S3, Azure Storage Accounts, Datamart, Redis, Kafka/Event Hubs, CHRS caching, SFTP pipelines; capacity/throughput tuning, connection pooling, multi-region durability
AI & ML	Langchain, LLM Integration, Prompt Engineering, Few-shot Learning, AI-powered Platforms, MCP Servers, MagentaSDK; streaming/recency/proximity data access patterns