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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* using Kubernetes, Apache Airflow, and open-source technologies.

- Architected multi-tenant compute platform on Kubernetes/Airflow with RisingWave/Spark/Flink, integrating Event Hubs and Storage Accounts, *enabling predictable throughput and multi-region durability*
- Built containerized runtime with dynamic NuGet management achieving *zero-downtime rollouts* and storage-backed artifact delivery; championed AI automation tools (MCP servers, SWE Agents, custom prompts), *accelerating team development velocity by 30%+*

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

Built large-scale distributed services, data pipelines, and customer experience platforms across Alexa targeting and Seller ecosystems using Java/Python and frontend frameworks.

- Architected *AI-powered automation platform* with Java/Python for Alexa+, *enabling intelligent device targeting across Music/News/Video domains and resolving millions of daily customer interactions with 99.9% availability*
- Re-architected targeting services with strategy pattern and Redis caching, *reducing external database reads by 50% and cutting p99 latency by 40%*; designed analytics schema and onboarded Endpoint Target Determination v2 to Datamart, *enabling operational insights while maintaining sub-10MB payloads*
- Led multi-device capabilities architecture and Vega OS launch with *20+ stakeholders* (Principal Engineers, Sr. SDEs, PMs); implemented I/O Decoupling capability routing in DDRI library/Alexa Service and validated load tests, *enabling 100+ domains to support multi-modal experiences and seamless global rollout for millions of devices*
- Designed domain-agnostic Skill Session Shortlister rules for Media Portability and built seller experience portals (Angular) with automated invoice pipeline (AWS SQS, S3, pooled SFTP), *enabling music transfer/resume across devices and 99%+ delivery success for thousands of international merchants weekly*

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.

- Built end-to-end platform with React/Node.js frontend (WebSocket real-time playback, Monet.js functional patterns) and Haskell backend (Markov Chain composition, gRPC/WebSocket services); implemented Redis caching with tuned TTLs, *reducing repeat recommendation load by 80%+*
- Deployed multi-service architecture on AKS using Helm/Bicep with CI/CD pipelines, Docker multi-stage builds, and TLS-terminated NGINX 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, SQL/NoSQL databases (DynamoDB, CHRS), SFTP pipelines; capacity/throughput tuning, connection pooling, multi-region durability, query optimization
AI & ML	Langchain, LLM Integration, Prompt Engineering, Few-shot Learning, AI-powered Platforms, MCP Servers, MagentaSDK; streaming/recency/proximity data access patterns