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arjunswaj

Arjun Shekar Bharadwaj

Software engineer with 10+ years of experience in distributed systems, AI/ML platforms and developer tools. Skilled in Java, Python, LLMs and agentic workflows.

Experience

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

Building secure, cloud-native compute platforms for Azure Resource Builder, processing billions of resource events for monitoring, compliance, and automation.

- Azure Resource Builder Compute Platform
  - Separated control and data planes to automate workspace provisioning, resource deployment and compute lifecycle management
  - Integrated Apache Airflow for workflow-driven processing with explicit retries, error handling and partner-defined DAGs
  - Introduced containerized runtimes so partners can bring Flink, Spark and RisingWave without language lock-in
  - Built the proof of concept, secured funding and led four engineers to deliver the platform with self-service onboarding
- Developer Experience & AI Tooling
  - Created container solution for dynamic NuGet package updates with zero-downtime deployments
  - Championed MCP servers for agentic workflows and custom prompts to speed up team development cycles
  - Deployed production services on AKS using Helm charts and multi-stage CI/CD pipelines

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

Built large-scale distributed services in Java (~80%) and Python (~20%). Delivered low-latency APIs, payment systems and multi-device platforms.

- AI-Powered Targeting & Action APIs – Alexa+
  - Built production AI agent system with MCP-like architecture. Enabled LLM-based device targeting for Music, News and Video domains
  - Designed RAG-style context enrichment with token optimization and Redis caching
  - Created prompt engineering pipelines with In-Context Learning. Achieved **90%+ accuracy** through test harness evaluation
- Cost & Latency Optimization – Music Recommendations
  - Rebuilt rule engine using composition and strategy patterns. Cut DynamoDB calls and **lowered costs by 50%** with better tail latency
  - Shipped Java APIs handling millions of daily requests. Tuned latency budgets with retry-with-jitter to meet SLOs at peak load
- Multi-Device Platforms & Leadership
  - Led Vega OS working group with 20+ members (Principal Engineers, Senior Engineers, Product Managers). Aligned API behaviors across device and cloud stacks
  - Ran Q4 readiness with load tests, chaos tests and capacity planning. Mentored engineers on design patterns and test coverage
- Invoice Generation – Global Seller Platform
  - Built async invoice workflow using S3 and secure SFTP to Deutsche Bank. Added connection pooling for reliable bulk transfers

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
Frameworks & APIs	Spring Framework, Spring Boot, Coral, AUI, Angular, jQuery, Proto + gRPC
Data & Messaging	AWS Data pipeline, Datamart, Kafka, Apache Airflow
AI & ML	LLM Integration, Prompt Engineering, Agentic Workflows, MCP Servers, RAG Systems, Langchain, Few-shot Learning