

Atul Manjunath Bharadwaj

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Experience

Panasonic Avionics Corporation

Software Engineer III

Irvine, CA

July 2025 – Present

- **Passenger Connectivity Platform:** Architected and scaled a serverless passenger internet platform on AWS (Lambda, DynamoDB, Redis), growing throughput to **50K paid sessions/month** while maintaining 99.9% uptime across 10+ airline customers.
- **Real-Time Connectivity Service:** Built a high-throughput Go backend using WebSockets and Redis to process live in-flight connectivity events, exposing low-latency REST APIs for session provisioning with full OTEL instrumentation and Datadog observability.
- **Performance Observability Pipeline:** Led API design, implementation, infrastructure, and dev workflow setup for a dockerized Node.js application deployed on AWS ECR/ECS that remotely automates performance testing, powering dashboards for the overall network health and performance of the satellite connectivity system across engineering teams.
- **Ecommerce Checkout Flows:** Delivered end-to-end passenger ecommerce features including checkout, voucher redemption, and session activation by integrating React frontends with GraphQL APIs and third-party payment services across multiple airline deployments.
- **Component Library:** Designed a shared React + TypeScript component library with Storybook and CMS integration, enabling dynamic portal composition and reducing per-customer frontend setup time significantly.
- **Event-Driven Webhook Pipeline:** Redesigned event ingestion using AWS EventBridge and SQS to handle **500 events/minute**, cutting end-to-end delivery latency by **67%** (3s → 1s) and eliminating message loss under peak load.
- **AI-Augmented Engineering Workflows:** Developed and shared AI-assisted workflows using LLM tools for code review, test generation, and data validation; built reusable internal agents that improved team throughput while enforcing verification practices to ensure output reliability.
- **On-Call and Incident Response:** Led incident response for high-availability production services; built Datadog dashboards, monitors, and runbooks that reduced **MTTR by 40%** and improved post-incident root cause turnaround.

Panasonic Avionics Corporation

Software Engineer II

Irvine, CA

July 2023 – June 2025

- **Airline Customization Platform:** Built a multi-tenant full-stack customization platform (React, GraphQL, PostgreSQL) serving **13 airline customers**, reducing new airline onboarding time from **months to days** by eliminating per-customer engineering work through dynamic configuration of pricing, currency, and language support.
- **Infrastructure as Code and CI/CD:** Owned multi-environment infrastructure provisioning using AWS CDK and CloudFormation, standardizing deployment pipelines across dev, staging, and production and reducing environment drift and rollback incidents.
- **Test Automation and Release Quality:** Built end-to-end and integration test suites in Playwright integrated into CI/CD pipelines, providing automated coverage across backend APIs and frontend workflows and measurably reducing production regressions.
- **Admin and Monitoring Dashboards:** Developed internal dashboards and admin tools enabling airline partners to monitor passenger sessions, payments, and connectivity status in real time, reducing support escalation volume and improving partner self-service.

Education

New York University

Master of Science in Computer Science; GPA: 3.75/4.00

New York, NY

September 2021 – May 2023

Coursework: Algorithms, Cloud Computing, Big Data and Hadoop, Artificial Intelligence, Software Engineering

Visvesvaraya Technological University

Bachelor of Engineering in Computer Science; GPA: 8.81/10.00

Bengaluru, India

August 2017 – July 2021

Skills

- **Languages & Frameworks:** TypeScript, JavaScript, Go, Python, Java, SQL, React, Node.js, GraphQL, REST, WebSockets
- **Infrastructure & Data:** AWS (Lambda, DynamoDB, SQS, EventBridge, S3, CDK), PostgreSQL, Redis, Kafka, Docker, CI/CD
- **Observability & AI:** Datadog, OpenTelemetry, LLM-assisted development, AI workflow automation, output validation
- **Concepts:** Distributed Systems, System Design, Multi-tenant SaaS, Event-Driven Architecture