Arundhati Das

Cloud Engineer/ Devops Engineer/ Backend Engineer

arundhutidas2000@gmail.com | +1 (272) 230-5395 | LinkedIn | GitHub | Portfolio | Dartmouth, MA, 02747

👤 PROFESSIONAL SUMMARY

Cloud Engineering Professional with 3+ years of experience architecting and managing distributed systems, specializing in **Kubernetes orchestration**, **Docker containerization**, and **Azure/AWS** cloud platforms. Proven expertise in microservices architecture, **CI/CD pipeline** optimization, and **Infrastructure as Code (IaC)** with a track record of achieving 95% uptime SLA and reducing deployment times by 80%. Strong background in real-time data processing and monitoring solutions for enterprise-scale applications. Actively seeking full-time opportunities.

🧠 SKILLS

Programming Languages: Go, Python, Java, JavaScript, SQL, Bash, PowerShell
Cloud Platforms: Azure *(Data Factory, Logic Apps, DevOps, Monitor, Databricks, Container apps)*, *AWS(*Lambda, Glue, Athena, S3, EC2, CloudWatch, QuickSight, Kinesis)
Enterprise Integration: ETL/ELT Processes, Data Transformation, Schema Mapping, Authentication (JWT, OAuth), Rabbit MQ
Infrastructure: Terraform, Docker, Kubernetes, CI/CD Pipelines
Databases: MySQL, PostgreSQL, CassandraDB, Azure SQL Database
Monitoring: CloudWatch, Azure Monitor, Data Quality Validation

📄 CERTIFICATES

Microsoft Azure Administrator Associate Az-104 ⧉   Aug 2025

Microsoft Azure Fundamentals, Az-900 ⧉   Feb 2023

💼 PROFESSIONAL EXPERIENCE

Teaching Assistant - OS & Computer Networks, *Umass Dartmouth*   Sep 2025 – Present | Dartmouth, USA
- **Systems Programming Instruction:** Led hands-on C programming labs for OS fundamentals, teaching process management, memory allocation, and system calls while guiding students through Linux kernel interactions
- **Network Protocol Implementation:** Mentored students in implementing TCP/UDP socket programming, network troubleshooting, and protocol analysis using Wireshark and network simulation tools
- **Academic Assessment:** Designed and graded complex assignments involving concurrent programming, file systems, and network security protocols for 40+ graduate and undergraduate students

Student Tutor - OS, Theory of Computation & Software Architechture,   Feb 2025 – May 2025 | Dartmouth, USA
Umass Dartmouth
- **Advanced CS Concepts:** Specialized tutoring in computational theory, finite automata, and algorithm complexity analysis, helping students master theoretical foundations essential for software engineering roles
- **Software Architecture Guidance:** Provided individualized support in design patterns, system architecture principles, and software engineering best practices, resulting in improved student project outcomes

Cloud Engineering Analyst, *Accenture | Client: Chanel*   Jul 2022 – Jul 2024 | Bengaluru, India
- **Container Orchestration at Scale:** Architected and managed 50+ containerized microservices using Azure Kubernetes Service (AKS), implementing pod auto-scaling, rolling deployments, and blue-green deployment strategies for zero-downtime releases across production environments
- **Docker Containerization:** Designed multi-stage Dockerfiles with optimized base images, implemented container security scanning, and established container registry management with Azure Container Registry, reducing image sizes by 40% and deployment times by 60%
- **Cloud-Native Development:** Developed Azure Functions with Event Grid triggers, implemented Service Bus messaging patterns, and built RESTful APIs using Azure API Management with OAuth 2.0 authentication and rate limiting for 10,000+ operations/hour
- **Advanced Monitoring & Observability:** Built comprehensive monitoring solutions using Azure Monitor, Application Insights, and Log Analytics with custom KQL queries, creating real-time dashboards and implementing automated alerting that reduced MTTR by 60%
- **Infrastructure as Code (IaC):** Automated Azure resource provisioning using ARM templates and Terraform, implementing GitOps workflows with Azure DevOps pipelines for consistent environment deployments across dev, staging, and production

Software Engineer Associate, *Accenture*   May 2021 – Jun 2022 | Bengaluru, India
- **CI/CD Pipeline Engineering:** Built Azure DevOps pipelines with Docker containerization, implementing automated testing, security scanning, and multi-environment deployments that reduced release cycles from weeks to hours
- **Process Automation & Optimization:** Developed Python automation scripts using ODBC connections to eliminate manual report generation workflows, reducing processing time from 120 minutes to 1 minute and improving operational efficiency across multiple business units

- **Performance Optimization:** Built high-availability API gateway architecture with Azure Application Gateway, configuring load balancing across 9 service instances and implementing caching strategies that improved response times by 75%
- **Data Pipeline Development:** Built ETL pipelines using Azure Data Factory with data quality validation, integrated Precisely APIs for real-time address/phone verification, and implemented monitoring for data freshness and accuracy
- **Technical Documentation & Knowledge Management:** Created comprehensive technical documentation, operational runbooks, and troubleshooting guides for complex Azure environments, enabling seamless knowledge transfer and reducing incident resolution time for support teams

⟩_ PROJECTS

Peril-Pub/Sub, *UMASS Dartmouth* ⧉   Nov 2025
- Built distributed multiplayer war game using **RabbitMQ and Go**. Implemented **direct, topic, and dead-letter exchanges** for routing game events between server and multiple concurrent clients
- Configured topic exchanges with wildcard routing for army movements (army_moves.*) and war declarations (war.)*. Used **direct exchange for broadcasting** pause/resume commands to all connected players
- Developed **event-driven consumers using goroutines** to handle simultaneous player actions. Implemented manual acknowledgments **(Ack/Nack/Requeue) with QoS prefetch limits** for backpressure control
- Architected durable queues for critical events and **transient queues** for ephemeral commands. Used JSON and Gob encoding with asynchronous log persistence to disk for battle outcomes

Video Hosting Platform with S3 & CloudFront CDN, *UMASS Dartmouth* ⧉   Oct 2025
- Implemented scalable file storage using **S3 PutObject API** and **Go** with **dynamic path organization by aspect ratio (landscape/portrait/other)**
- Processed MP4 files using **FFmpeg with faststart movflags** to relocate **moov atom metadata to file beginning**. Enabled progressive streaming by allowing browsers to start playback before full download, reducing initial buffering time
- Integrated **CloudFront distribution** for global content delivery with reduced latency. Replaced direct **S3 URLs with CDN endpoints** to leverage edge caching and improve video streaming performance across geographic regions
- Built **RESTful API with JWT-based** authentication, refresh token rotation, and SQLite database. Managed **video metadata, user sessions, and file references** with proper foreign key relationships and automatic migrations
- Built **multipart form upload handler with 1GB limit and 10MB memory threshold**, Implemented local file server for thumbnails with cache-control headers and base64-encoded asset path generation for secure file management

Charcha | Social-Media API, *UMASS Dartmouth* ⧉   Aug 2025
- Built RESTful API with **15+ endpoints** for real-time data exchange and system integration with comprehensive functionality
- Implemented **JWT authentication** with secure session management and authorization middleware for enhanced security
- Deployed on **Azure Container Apps with auto-scaling (0-10 replicas)** and managed PostgreSQL integration for optimal performance
- **Containerized FastAPI application** with optimized Python 3.11-slim base image reducing resource consumption
- Implemented **database migrations using Alembic** with version control and rollback capabilities for schema evolution

Real-time Weather Analytics Platform, *UMASS Dartmouth* ⧉   Dec 2024
- Built streaming **ETL pipeline using AWS Lambda** collecting weather data every 5 mins from National Weather Service API
- Created interactive dashboard using **AWS QuickSight** to visualize real-time weather metrics across **14 U.S. regions including temp, humidity, and weather alerts**
- Implemented automated **data quality monitoring using CloudWatch** for freshness and anomaly detection

✦ LEADERSHIP & RECOGNITION

Sparkling Star Award   May 2023
- Received **Sparkling STAR Award** for exceptional technical excellence and project delivery, demonstrating outstanding contributions to enterprise-scale solutions

🐋 EXTRA CURRICULUM

Participated in HackPrinceton Fall 2025, *Princeton University*   Nov 2025 | New Jersey, USA
- Built **LeafCart**, an AI-powered sustainability tracker integrating **Knot API** for transaction data across 7 merchants (Amazon, Walmart, Target, etc.). Used **Google Gemini 2.5 Flash** to analyze products across 10 sustainability factors and generate 0-100 scores with eco-friendly alternatives

Participated in Hack@Brown 2025, *Brown University*   Feb 2025 | Providence, USA
- Built **AutoDoc** at Brown University Hackathon: AI documentation generator using **Deepseek LLM via Ollama, FastAPI backend,** for code analysis

🎓 EDUCATION

Master of Science (Major: Computer Science),   Jun 2026 | Dartmouth, USA
University Of Massachusetts Dartmouth (GPA 3.8 / 4)
   Relevant Coursework: *Algorithms & Complexity, Paradigmatic Software Development, Big Data Analytics*

Bachelor of Technology (Major: Computer & Communication),   May 2021 | Jaipur, India
Manipal University Jaipur (CGPA 3.4 / 4)