SUNIL KUMAR DAS

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STATUS: U.S. Permanent Resident (Green Card Holder)

PROFESSIONAL SUMMARY

Technical Leader with 10+ years building microservices systems that serve enterprise supply chain and logistics companies. Led 11 engineers across 2 teams, delivering 20+ features with 99.9% uptime. Reduced system load times by 87%, cut API costs by 70%, and built distributed caching architecture handling 100,000+ concurrent operations. Strong background in transportation management systems (TMS), including route optimization, fleet management, and real-time tracking platforms. Full-stack polyglot engineer proficient in both Java/Spring Boot microservices and Python for backend APIs, data engineering, automation, and integration workflows. Actively exploring generative AI and large-language-model integrations to power the next generation of logistics-platform features

CORE TECHNICAL SKILLS

Languages & Frameworks: Java 17 (8/11 legacy), Spring Boot, Spring Cloud, Spring MVC, Spring Security, Hibernate/JPA, Python 3.x, Flask/FastAPI, Pandas, SQLAlchemy, REST/RESTful APIs, Microservices, Event-Driven Architecture, OOP, Design Patterns, Concurrency, Multithreading

Cloud & Infrastructure: AWS (EC2, S3, Lambda, RDS, VPC, IAM, SageMaker, Step Functions), GCP (Compute Engine, Cloud Storage, Cloud Functions), Google Pub/Sub, Docker, Kubernetes (K8s), Helm, Terraform, Jenkins, GitHub Actions, CI/CD Pipelines, Serverless Architecture

Data & Messaging: PostgreSQL (pgvector), Oracle SQL, MongoDB, MySQL, NoSQL, IBM MQ, Apache Kafka, RabbitMQ, ActiveMQ, Hazelcast, HikariCP, Database Design, SQL Optimization, Data Modeling, Python scripting for data processing

DevOps & Monitoring: Dynatrace, Splunk, New Relic, Elasticsearch (ELK Stack), Kibana, Grafana, Prometheus, Solr, PagerDuty, Log4j2, SLF4J, Maven, Gradle, Git, Bitbucket, GitHub, kubectl, Ambassador, APM Tools, Python automation scripts

Architecture & Design: System Design, Distributed Systems, Scalability, High Availability, Fault Tolerance, Event-Driven Architecture, SOLID Principles, Service-Oriented Architecture (SOA), API Gateway, Load Balancing, Caching Strategies, SRE Practices

Supply Chain & Domain: TMS (Transportation Management Systems), Route Optimization, Real-time Tracking, Fleet Management, Carrier Management, EDI Integration, Transportation Optimization, Logistics Platforms, Shipment Visibility, Order Fulfillment, ETA Calculation

Leadership & Process: Technical Leadership, Team Lead, Engineering Management, Mentorship, Coaching, Architecture Reviews, Technical Documentation, Agile/Scrum, Kanban, Sprint Planning, Stakeholder Management, Cross-Functional Collaboration, Hiring & Interviewing, Performance Reviews

Security & Compliance: OWASP Top 10, Secure Coding, OAuth2, JWT, SAML, Active Directory, LDAP, HIPAA, GDPR, CCPA, Section 508/WCAG Accessibility, CVE Remediation, PHI/PII Protection

Testing & Quality: JUnit, Mockito, TestNG, Selenium, pytest, TDD/BDD, Unit Testing, Integration Testing, End-to-End Testing, Code Reviews, Static Code Analysis, SonarQube, Performance Testing, Load Testing, Production Support, Incident Management

PROFESSIONAL EXPERIENCE

Tech lead (Senior Full Stack Software Engineer) — Manhattan Associates (US-based Supply Chain SaaS) — 2020 – Present

Team Leadership & Technical Direction
• Lead and mentor 11 engineers across 2 squads through 1-on-1s, code reviews, and architecture discussions
• Set technical direction for microservices platform serving transportation management (TMS) clients across North America
• Run sprint planning, break down epics into stories, estimate work, and ensure on-time delivery using Agile/Scrum
• Review architecture and designs to catch issues early, maintain OWASP security standards, and avoid technical debt
• Cut team's Mean Time to Resolution by 45% through root-cause analysis, better testing, and post-incident reviews
• Established code review standards and security practices, reducing production defects by 60%

Strategic Technical Delivery (20+ Enterprise Features)
• Cut load times from 15 seconds to 2 seconds for 100,000+ concurrent trips by redesigning caching with Hazelcast and optimizing database connection pooling with HikariCP
• Reduced external API costs by 70% by building intelligent cache layer for PC*MILER routing calls, saving significant operational expenses
• Built real-time tracking system integrating OBD devices and GPS to provide live shipment updates and dynamic ETA calculations for delivery fleets

• Designed a zero-downtime, idempotent Python migration framework that moved 200 M rows from a legacy Oracle fleet-management schema to a new Dispatch data model, handling entity-structure differences (splits, merges, enum conversion).

• I built a carrier-scoring micro-service that returns the top-N carriers for any shipment, blending price, ETA, compliance, and a live acceptance-ratio metric
• Wrote Python scripts to parse EDI 214/990 files and convert to JSON format using custom parsers and regex, processing shipment status updates for integration with REST APIs
• Added gRPC for service-to-service communication, improving latency and throughput between microservices in critical TMS workflows
• Integrated OAuth2 authentication with enterprise identity management to improve security and enable SSO for TMS customers
• Created auditing framework with transaction trails, data retention, and transparency reports to meet US transportation regulatory requirements
• Developed data import pipeline with EDI support, invoice generation with tax validation, event processing, and carrier acceptance algorithms
• Improved cold-start times from > 1 second $\rightarrow < 200$ ms by shrinking the Lambda deployment package (< 10 MB) and enabling Provisioned Concurrency for the high-traffic carrier-scoring service.
• Fixed "TooManyConnections" on RDS by implementing a module-level connection pool (psycopg2.pool.ThreadedConnectionPool) and adding RDS Proxy; connection count fell from $120 \rightarrow 12$, eliminating throttling-related request failures.
• Accelerated external API calls by replacing blocking requests calls with async httpx + asyncio, reducing average third-party latency from 1.4 s $\rightarrow 0.3$ s and cutting Lambda duration by 45 %.
• Reduced logging cost 85 % via structured logging (aws-lambda-powertools), masking PII, and setting CloudWatch retention to 30 days; monthly Log storage fell from 3 GB $\rightarrow 0.5$ GB.
• Developed internal CLI tools in Python for common DevOps tasks: database schema migrations with Alembic, log file parsing, and environment health checks

Cross-Functional Leadership & Innovation
• Built TMS Mobile app from scratch using Ionic/Angular, gathering requirements from stakeholders, designing architecture, and integrating 25+ backend APIs with Firebase for real-time updates
• Set up CI/CD pipeline in Jenkins with security scanning, cutting deployment time from days to hours and enabling weekly releases
• Led Spring 5, Hibernate 5, and Java 11 upgrade across the codebase with zero downtime, fixing security vulnerabilities and improving performance

• Work with Product, UX, and Customer Success to turn customer needs into technical solutions while managing technical debt

Operational Excellence & Production Support
• Set up Dynatrace monitoring and PagerDuty alerts with SLOs/SLIs to track API performance and catch issues before customers notice
• Built remote debugging setup with Telepresence (Ambassador Labs) so the team could troubleshoot production issues 70% faster
• Configured Elasticsearch/Solr search on AWS, working with DevOps on capacity planning and auto-scaling
• Lead on-call rotation for P1/P2 incidents, running incident response and blameless post-mortems to prevent repeated issues

Engineer II — J.C. Penney (Major US Retailer) — 2020
• Delivered 40% web application performance improvement through asynchronous loading, CDN optimization, and resource delivery enhancements for high-traffic e-commerce platform
• Collaborated with cross-functional Agile team of 8+ engineers based in Plano, TX, participating in sprint ceremonies, technical discussions, and quality assurance
• Mentored other developers on JavaScript best practices, performance optimization techniques, and web accessibility standards (WCAG 2.1)

Associate — Cognizant (Etihad Airways Client Engagement) — 2019 – 2020
• Developed fault-tolerant REST APIs for airline consent-management platform with 99.9% uptime, supporting global passenger data privacy and regulatory compliance
• Partnered with compliance and legal teams to ensure GDPR, CCPA, and international aviation regulatory readiness, implementing robust error handling and comprehensive audit logging
• Built scalable backend workflows handling passenger consent requests across multiple jurisdictions, meeting aviation industry data protection standards
• Contributed to technical design discussions and code reviews, advocating for scalability, maintainability, and adherence to enterprise architecture standards

Technology Analyst — Infosys (Aetna Healthcare Client) — 2015 – 2019
• Built enterprise authentication and authorization system (Spring Security, Active Directory/LDAP, JWT) serving 50,000+ healthcare users with 99.95% availability, ensuring HIPAA compliance
• Developed Python scripts for healthcare claims data processing and validation, automating repetitive manual tasks and generating reports from database queries

• Led development of role-based access control (RBAC) framework compliant with HIPAA and healthcare security policies, collaborating with InfoSec and compliance teams on requirements and implementation
• Developed secure, responsive web interfaces with HTML5/CSS3/Bootstrap ensuring Section 508 accessibility compliance for healthcare applications and cross-browser compatibility
• Implemented security controls for protected health information (PHI) access, including audit logging, session management, and secure authentication workflows
• Mentored 3 junior engineers on Spring framework, secure coding practices (OWASP), healthcare compliance requirements, and enterprise development standards

EDUCATION
Bachelor of Technology — Electrical & Electronics Engineering | IIIT Bhubaneswar | CGPA: 8.35/10

TECHNICAL PROJECTS & OPEN SOURCE

AI-Powered Audiobook Generator | Python, LangChain, PostgreSQL pgvector, OpenAI API | 2025
• Built web content extraction and summarization tool using Docling for document parsing and LangChain for AI orchestration
• Implemented PostgreSQL with pgvector extension for storing document embeddings and semantic search capabilities
• Developed pipeline converting web articles to audio: scraping with BeautifulSoup → summarization with GPT-4 → text-to-speech with gTTS
• Tech stack: Python, FastAPI, LangChain, OpenAI API, PostgreSQL with pgvector, BeautifulSoup, pydub

Personal Finance Dashboard | Python, Streamlit, SQLite
• Built web dashboard for tracking personal expenses and visualizing spending patterns over time
• Implemented CSV import for bank statements with automatic categorization of transactions
• Created interactive charts using Plotly showing monthly trends and category breakdowns
• Tech stack: Python, Streamlit, Plotly, pandas, SQLite

LEADERSHIP & AWARDS
• Manhattan Associates — Star of the Quarter for outstanding technical leadership, innovation, and team impact
• Infosys — Zircon Award for exceptional performance and significant contributions to project success

• Mentorship: Guided 11 engineers through career growth, technical skill development, and leadership opportunities
• Hiring: Interviewed 25+ candidates, providing technical assessment and cultural fit evaluation