TEJAS MURKYA

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SUMMARY

Software Engineer with 2+ years of experience designing and building distributed, real-time, and cloud-native systems. Strong foundation in data structures, algorithms, and system design, with hands-on experience optimizing performance, reliability, and scalability in production environments. Proficient in Angular, React, Python, and Java, with experience across event-driven architectures, UI visualizations, storage systems, and cloud infrastructure on AWS and GCP. MSc in Computer Science, with proven ability to debug complex systems, participate in design reviews, and deliver high-quality software in fast-paced engineering teams.

TECHNICAL SKILLS

- Languages: Python, Java, TypeScript, JavaScript, SQL, C++ (academic)
- Systems & Infrastructure: Distributed Systems, Event-Driven Architecture, Microservices, Linux
- Backend & Frontend: FastAPI, Django, Flask, Node.js, REST APIs, React, Angular, NgRx, RxJs
- Data & Storage: PostgreSQL, MongoDB, Firestore, NoSQL, Query Optimization, Redis
- Streaming & Real-Time: Kafka, WebSockets, High-frequency ingestion (20Hz+)
- Cloud & DevOps: AWS (EC2/S3), GCP (Firestore/GCS), Docker, Terraform, CI/CD
- Testing & Quality: Pytest, Jest, Jasmine, TDD, Code Reviews
- Core CS: Data Structures, Algorithms, Concurrency, Performance Optimization

EXPERIENCE

Associate Software Developer — Itanta Analytics (Feb 2023 – Apr 2024)

- Designed and developed distributed backend services in Python (FastAPI, Django), improving system throughput by 40–45% for real-time analytics workloads.
- Built event-driven data pipelines using Kafka and WebSockets, enabling low-latency processing of high-frequency data.
- Applied appropriate data structures and algorithmic optimizations within well-structured OOP and SOLID design to reduce processing latency, decrease duplication, and improve system scalability.
- Optimized PostgreSQL and MongoDB query response through indexing, query restructuring, and pagination, containing 100K+ of rows with 100 columns, reducing API response times by 35–40%.
- Led debugging and root cause analysis (RCA) across multi-service systems, resolving production issues impacting reliability, network behavior, and service quality.
- Fabricated the frontend using Angular with Typescript, making it 30-40% performant using lazy loading and memorization techniques.
- Participated in architecture and design reviews, proposing changes that reduced service latency and improved long-term maintainability.
- Containerized services using Docker and deployed to AWS via CI/CD pipelines, ensuring predictable, repeatable, and reliable releases.
- Secured the platform using input validation, JWT & Oauth-based authentication, role-based access, and logging, maintaining access history.
- Managed feature priorities and delivery timelines, balancing performance, reliability, and maintainability in a production environment.
- Collaborated closely with product managers and stakeholders to deliver features aligned with user and business needs.

Frontend Developer Intern — DC Ikigai (May 2021 – Aug 2021)

- Built responsive UI components (React/Angular) and integrated backend APIs to improve user workflows and performance.
- Debugged production UI issues, reducing repeat support requests by 20%.
- Practiced Agile development, version control, and cross-team collaboration.

EDUCATION

- MSc Computer Science, University of Southampton — Merit (2024–2025)
- BTech Electronics & Telecommunications, VIT Pune — CGPA: 9.03

PROJECTS

Real-Time Physiological Signal Analytics Platform (MSc Dissertation)

- Built a cloud-native ingestion and analytics system using Python (FastAPI), Kafka, GCP Firestore/GCS, processing 20Hz time-series data.
- Implemented validation, auditing, and stress-testing pipelines; deployed via Docker + CI/CD.
- Designed for reliability, scalability, and low-latency performance.

Secure Text Transfer using Diffie-Hellman (AWS EC2)

- Developed a secure messaging system using Python + JavaScript with AES encryption and DH key exchange.
- Deployed on AWS EC2 with Apache; optimized for resiliency and low-latency communication.

Vision-Based Lane Detection (Computer Vision)

- Built a computer vision pipeline using OpenCV + NumPy to detect road curvature from 3,000+ images.
- Achieved 95%+ accuracy through feature extraction and algorithmic optimization.

ACHIEVEMENTS

- Patent: Cloud-Driven Detection and Alerting System (CPIC, SA)
- HackerRank Software Engineer Certification
- Randstad X Enactus UK & Ireland — Highly Commended Consultant