Tejas Murkya

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Professional Summary

Junior Software Engineer with hands-on experience delivering scalable, maintainable web applications using TypeScript, React, Angular, and Node.js. Skilled at designing feature-rich UIs, implementing robust state management, and ensuring application stability with automated testing. Experienced in CI/CD pipelines, containerized deployments, and observability tools, providing rapid and reliable product delivery. Adept at collaborating in cross-functional Agile teams, driving innovative solutions to problems through modern software engineering practices like TDD, continuous delivery, and pipeline automation.

Work Experience

Associate Software Developer

Itanta Analytics *Feb 2023 - Apr 2024*

- Delivered enterprise-grade web features by architecting applications with TypeScript and Angular (monorepo Nx), ensuring scalable and maintainable codebases.
- Integrated real-time data pipelines with Kafka and WebSockets, enabling live dashboards and improving analytics freshness for critical decision-making.
- Championed TDD practices, achieving >85% test coverage with Jest, Jasmine, preventing regressions, and maintaining release quality.
- Automated CI/CD pipelines with Docker and Bitbucket, reducing deployment cycles by 50% and supporting stable, frequent production releases.
- Enhanced observability by implementing monitoring and logging dashboards, reducing mean-time-to-detection (MTTD) and improving system resilience.
- Collaborated closely with product managers and engineers, simplifying architectures and rationalizing solutions to meet business and compliance goals.
- Built scalable backend microservices in Python (Flask & Django) with advanced data structures and algorithms, removing processing bottlenecks and enabling near real-time analytics for enterprise clients.
- Designed and optimized REST APIs and PostgreSQL/MongoDB queries, cutting analytics query latency and improving frontend refresh speeds by 40%.

Frontend Developer Intern

DC Ikigai Private Limited *May 2021 - Aug 2021*

- Built scalable, reusable React components with Material UI, improving maintainability and accelerating new feature delivery.
- Enhanced responsive and accessible design across devices and browsers, improving user experience for diverse customer bases.
- Partnered with designers and backend engineers to launch landing pages and customer-facing features on schedule.
- Used GitHub workflows for version control, enabling efficient collaboration across the team.

Technical Skills

- **Languages & Web Tech:** TypeScript, JavaScript (ES6+), HTML5, CSS3, SCSS
- **Frameworks & Libraries:** React (Hooks, Redux, Material UI), Angular (Nx, NgRx, RxJS), Node.js
- **API & Messaging:** REST, WebSockets, Kafka
- **Testing & Quality:** Jest, Jasmine, Mocha, Cypress, TDD practices (>85% coverage)
- **DevOps & CI/CD:** Docker, Bitbucket Pipelines, Git, Continuous Integration/Delivery
- **Cloud & Observability:** Logging & monitoring dashboards (Dynatrace/Splunk familiarity), deployment automation
- **Others:** Kubernetes (learning), Playwright (automation testing exposure)
- **Core CS Fundamentals:** Object-oriented design, algorithms, data structures, concurrency, performance optimization

Education

University of Southampton Master's Degree (MSc), Computer Science — Sept 2024 - Sept 2025

Modules undertaken - Web and Cloud Development, Network and Web-based Security, Advanced Databases and Data Structures, Cryptography, Artificial Intelligence — 2:1 *predicted*

Vishwakarma Institute of Technology Bachelor's Degree, Electronics and Telecommunications — Aug 2019 - May 2023

Modules undertaken - Web and cloud development, Object-oriented Programming, Data Structures and Algorithms — 9.03 CGPA

Projects

Dissertation – Decoding the Rhythm of the Body: Analysis of Multivariate Physiological Time Series Data *2025*

- Designed and deployed a cloud-hosted Python (FastAPI) platform for governing feature extraction and data pre-processing of 20 Hz physiological data streams.
- Built a responsive Angular dashboard (SCSS, TypeScript, RxJS) with reusable components and scalable state management for real-time visualisation.
- Applied unit/integration testing (Pytest, Jest) to validate system stability, preventing regressions and improving reliability.
- Implemented secure authentication (JWT + OTP) and enforced GDPR-style access control with audit logging.
- Optimised load times by >30% through scalable architecture, asynchronous processing, and caching strategies.

Cloud-based fitness governing web application *2025*

- Created a React.js frontend with Material UI for interactive data visualization of fitness metrics using Echarts.js.
- Deployed using Azure and Terraform, integrating role-based authentication for secure access, maintaining an event-driven architecture.
- Added in-app messaging and booking functionality for trainers and members.
- Ensured cross-browser/device compatibility and accessibility compliance.

Vision-Based Detection of Road Lane Curvature *2022*

- Prototyped an AI-driven computer vision model using OpenCV + NumPy to detect and predict road lane curvature from a dataset of 3000+ images.
- Designed and iterated algorithms for curve detection, optimizing for real-time responsiveness and reliability under varying conditions.
- Applied data preprocessing, feature extraction, and simulation techniques to ensure accuracy and robustness of predictions.
- Achieved 95.42% detection accuracy, demonstrating ability to design, test, and ship AI-powered features with measurable performance improvements.

Achievements and Certifications

Consultant Jul 2025

Randstad X Enactus UK & Ireland

- Awarded as “Highly Commended” candidate among the only two by Randstad.
- Tasked with the recruiting problem - "Reclaiming Authenticity in the age of AI Applications"
- Gave innovative solution like AI transparency prompts, voice-based reflection tasks, and Trust Score mechanisms to record the authenticity score in applications

Software Engineer Nov 2024

Hackerrank certification - 8df6b61a607d

Cloud Driven IOT based system for prevention of locust attack Aug 2023

- CPIC patented project developed in bachelors.
- Developed a real-time locust detection system using ESP32, piezo buzzers, and ultrasonic sensors, integrated with Android and Arduino Cloud.
- Enabled automated alerts on mobile application and mitigation through controlled sound-based deterrents.
- Achieved controlling of device through mobile application via cloud accessible from anywhere.

Leadership & Extracurriculars

- Vishwakarma Expression Hub :- Design Head (2020 - 2022)
  - Led a team of 3 designers.
  - Focused on year long branding and formulating creative designs in team.
  - Collaborated with team designing posts using adobe illustrator and figma. keeping the UX minimalistic and engaging users visually at the same time.
- Social Welfare and Development Committee - Design Head (2021 - 2022)