SPARSH JAIN

Software Development Engineer in Test (SDET)

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PROFESSIONAL SUMMARY

Results-driven SDET with 1.5+ years of experience building scalable test automation frameworks from scratch. Expert in Playwright, TypeScript, and AI-driven QA. Proven track record of reducing regression time by 90%, implementing enterprise-grade testing suites, and discovering critical security vulnerabilities. Passionate about quality engineering, framework architecture, and leveraging AI to accelerate testing velocity.

TECHNICAL SKILLS

Test Automation: Playwright, Selenium, API Testing, Page Object Model (POM), Allure Reports, E2E Testing, Regression Testing, Smoke Testing, Sanity Testing

Programming Languages: TypeScript, JavaScript, Java, Python, SQL, NoSQL

CI/CD & DevOps: GitHub Actions, Docker, Kubernetes, Jenkins, CodeQL, JMeter, Lighthouse Performance Testing

AI-Driven QA: Cursor AI, Model Context Protocol (MCP) Servers, GPT-based Test Generation, AI-Powered Locators

Web Frameworks: Next.js, React.js, Express.js, Node.js

Tools & Technologies: Git, JWT, Cloudflare Workers, Prisma ORM, MondgoDB, Zod Validation, REST APIs, JSON Schema Validation

PROFESSIONAL EXPERIENCE

Urbint India Pvt Ltd (now Itron, Inc.)　　　　　　　　　　　　　　**June 2024 – Present**
Software Engineer - 1　　　　　　　　　　　　　　　　　　　　　　　　　Bengaluru, India

- **Architected and built Urbint's Playwright automation framework** from the ground up, designing scalable POM architecture, reusable utility libraries, backend schema validators, and Slack-integrated CI/CD reporting system.
- **Automated 300+ critical end-to-end test scenarios** across Template Builder, Smart Job Safety Briefing (JSB), and Worker Safety workflows, **reducing regression testing time from 3 days to 4 hours (90% reduction).**
- Engineered a Dynamic JSON-based CWF Component Validator enabling automated backend response verification for any template ID across development, staging, and production environments.
- Developed **enterprise-grade WS Sanity Test Suite** for Desktop and iPad platforms, providing **confident Go/No-Go decisions for production releases with 95%+ test coverage.**
- Designed and implemented a multi-tenant, multi-environment, multi-user Smoke Suite with intelligent tab-awareness and near-zero flakiness, adopted as the default developer sign-off suite across all teams.
- **Built Urbint's Quality Vault (Next.js 15, TypeScript, AI, MySQL): comprehensive Quality Intelligence platform** integrating CI/CD analytics(real time integrated with github), automation trends, unit test metrics, JMeter load testing, Lighthouse performance audits, CodeQL security scans, AI-powered Test Case Generator (GPT + JIRA API Integration), centralized test case repository(SOT), and real-time Quality Score dashboard.
- Implemented **type-safe API validation layer** with automated schema validation, backend call verification, environment-aware data resolution, and comprehensive metadata logging.
- **Accelerated automation** development velocity by **10x** leveraging AI technologies: **ChatGPT/Claude** for intelligent locator generation, **Cursor AI** for rapid script development, and **Playwright MCP Agents** for test planning and self-healing tests.
- **Authored complete test case suite for entire Worker Safety product line**, collaborating cross-functionally with **developers, product managers, and sales teams** to identify and address quality gaps.
- Discovered and responsibly **disclosed critical Power BI client-secret security vulnerability**, receiving sprint-wide recognition and immediate remediation by security team.
- **Mentored and onboarded 5 QA team members** on JavaScript, GitHub workflows, Playwright best practices, Model Context Protocol (MCP), and AI-based automation techniques.

Caterpillar Inc.　　　　　　　　　　　　　　　　　　　**June 2023 – August 2023**
College Intern　　　　　　　　　　　　　　　　　　　　　　　　　Bengaluru, India

- Developed automated test flows using **Java and Selenium WebDriver**, successfully **decoupling dependent test flows** to improve test reliability and reduce maintenance overhead.
- Created **dynamic XPath selector strategies** and enhanced data-driven testing execution framework for shipment and logistics workflows.
- Contributed to **load and performance testing initiatives**, improving robustness of critical shipment processing systems.

EDUCATION

Bachelor of Technology in Computer Science   **2020 – 2024**
Indian Institute of Information Technology (IIIT), Dharwad   *CGPA: 7.83/10.0*
Intermediate (+2), CBSE   **2019**
India Overseas School   *88.60%*
Matriculation, CBSE   **2017**
Warren Academy School   *9.40 CPI*

PROJECTS

Explora Stays · Link   *Next.js, TypeScript, Prisma, MongoDB*
- Full-stack property listing platform with secure NextAuth authentication, Next.js server actions, dynamic filtering, and real-time data synchronization using Prisma ORM and MongoDB.

Chat Karo · Link   *React.js, Firebase*
- Real-time chat application with Firebase Authentication, Firestore real-time database, and responsive UI design.

ACHIEVEMENTS & LEADERSHIP

Winner – Urbint Global Hackathon'25 · Competed against 25 global teams in 48-hour innovation challenge
Winner – Developthon'22 · 36-Hrs Hackathon conducted by Deshpande Startups, Hubli, Karnataka
Lead, Web Development Team · Google Developer Students Club (GDSC), IIIT Dharwad · Mentored 100+ juniors through foundational web development training sessions; Led team of 20 members in building complete hotel booking platform
Lead, Campus Plantation · National Service Scheme (NSS) · Planted 100 Plants all over the campus of IIIT, Dharwad with a team of 25 members
Member, Hackathon Organizing Committee · Urbint · Planned and executed Urbint's inaugural global hackathon with 25 international teams
Member, Employee Engagement Committee · Urbint · Collaborate with HR to design and execute team events fostering positive workplace culture

ADDITIONAL INFORMATION

Certifications: Data Structures & Algorithms (GeeksforGeeks), 100xDevs Full Stack Cohort 0-100, Web Development Bootcamp (Udemy)

Coding Profiles: LeetCode (500+ problems solved), GeeksforGeeks (750+ score)

Interests: Financial Markets & Technical Chart Analysis, Strength Training & Athletic Performance, Guitar & Music Composition