

P. SIVA PRAKASH

SOFTWARE ENGINEER • FULL STACK DEVELOPER • PYTHON DEVELOPER • QA AUTOMATION ENGINEER

Madurai, Tamil Nadu, India | Phone: 8925197800 | Email: sivasj0225@gmail.com | github.com/sivaprakashtech | [LinkedIn](#)

PROFESSIONAL SUMMARY

Software Engineer at Amazon with a track record of shipping production-ready software — 10+ full-stack applications built, deployed, and live on Vercel and Render. Strong in React, TypeScript, Python, Flask, Next.js, and REST API development, backed by deep expertise in QA automation, WiFi network validation, and root cause analysis. Designs, builds, tests, and deploys complete software products end to end — from database schema and API architecture to responsive UI and CI/CD pipelines. Available for full-time software engineering roles and remote freelance engagements.

TECHNICAL SKILLS

Languages:	Python, JavaScript, TypeScript, SQL, HTML5, CSS3, Bash, OOP, Data Structures
Frontend:	React, Next.js, Vite, Tailwind CSS, Responsive UI, Framer Motion, Recharts, Axios
Backend:	Flask, Node.js, Express.js, REST API Development, Supabase, SQLAlchemy, Gunicorn
Databases:	PostgreSQL, MongoDB, SQLite, MySQL, Database Design, Schema Normalization
Testing & QA:	Manual Testing, Playwright, Unit Testing, Regression, Smoke, API Testing, Bug Lifecycle
Networking:	WiFi 6/6E, TCP/IP, DNS, DHCP, Wireshark, iPerf3, Flent, Packet Analysis, Linux
Cloud & Deployment:	Docker, GitHub Actions, CI/CD Pipelines, Vercel, Render, Nginx
Methodologies & Tools:	Agile Scrum, SDLC, STLC, Git, GitHub, VS Code, Postman, JIRA, TestRail

PROFESSIONAL EXPERIENCE

Software Engineer / QA Engineer May 2025 – Present
Amazon — Devices & Services, Chennai, India

- Own end-to-end quality for WiFi 6/6E subsystems across 2.4 GHz, 5 GHz, and 6 GHz bands — designed and executed 300+ functional, regression, and performance test cases within Agile sprint cycles
- Developed Python automation scripts for WiFi test execution and log analysis, reducing repetitive manual effort and accelerating regression cycles
- Uncovered throughput degradation, latency spikes, and packet-loss root causes in firmware releases through systematic benchmarking with iPerf3, Flent, and Wireshark
- Performed root cause analysis on connectivity, jitter, and roaming failures in multi-AP mesh topologies using deep packet inspection
- Validated SQM (Smart Queue Management) behavior under high-traffic conditions, verifying bufferbloat grades and end-user latency improvements across device configurations
- Partnered with firmware engineers and cross-functional teams to triage and resolve critical JIRA defects, protecting sprint delivery commitments and release timelines

FEATURED PROJECTS

GrowthPilot-AI — Enterprise AI-Powered Business Platform

Next.js 14 · TypeScript · Supabase · PostgreSQL · OpenAI · Tailwind CSS · Docker · GitHub Actions

- Architected a multi-tenant SaaS platform consolidating CRM, SEO intelligence, AI content studio, analytics, and billing into 20+ integrated modules — designed to replace multiple disconnected business tools
- Integrated OpenAI GPT APIs for AI content generation, workflow automation, and business intelligence with real-time streaming responses
- Designed a 60+ table PostgreSQL schema with Row Level Security, triggers, and composite indexes enforcing complete tenant data isolation
- Implemented RBAC with 11 system roles and granular permissions; structured a TurboRepo monorepo with shared packages for UI, auth, and types

Playwright Automation Dashboard — Enterprise QA Automation Platform

React · TypeScript · Flask · Python · JWT · SQLAlchemy · Docker · GitHub Actions

- Built a centralized platform that replaces scattered QA tooling — unifying test project management, execution monitoring, evidence storage, and reporting into one full-stack application
- Developed 30+ REST API endpoints with JWT authentication, bcrypt encryption, Marshmallow validation, and SQLAlchemy ORM

- Shipped with Docker containerization, GitHub Actions CI, APScheduler-based test scheduling, and a 42-test automated smoke suite verifying every API contract

ShopFlow-Pro — Multi-Vendor E-Commerce Marketplace

Python · Flask · SQLAlchemy · Docker · Nginx · Gunicorn

- Built a production-grade multi-vendor marketplace with a 25+ table relational schema covering vendors, products, orders, payments, reviews, and commissions
- Created an AI recommendation engine using collaborative filtering across browsing history and purchase patterns for personalized suggestions
- Hardened security with CSRF protection, XSS prevention, script hashing, and full audit trail; deployed with Docker, Nginx, Gunicorn, and a 130-test automated QA suite

WiFi-Analyzer-Pro — Network Monitoring & Diagnostics Platform

React 19 · Flask · Python · SQLite · Tailwind CSS · Recharts

- Developed a full-stack WiFi monitoring platform with real-time signal analytics, network scanning, speed testing, and diagnostics across 8 feature modules
- Built a Python backend with 15+ REST endpoints interfacing with OS-level networking utilities for live RSSI measurement, channel analysis, and latency diagnostics

DevForge — Browser-Based Developer Toolkit

React · Vite · Tailwind CSS · Monaco Editor · Framer Motion

- Architected a privacy-first toolkit with 10 independent tool modules (JSON Studio, Code Playground, Regex Tester, API Client) sharing state through React Context and LocalStorage
- Integrated Monaco Editor (VS Code engine) with lazy loading; achieved sub-2-second initial load via code splitting — all processing client-side, zero backend

BugTracker-Pro — Issue Tracking Platform

MongoDB · Express.js · React · Node.js · JWT

- Developed a MERN-stack bug tracking system with RBAC across Admin, Developer, Tester, and Viewer roles and compound-indexed MongoDB schema
- Created an analytics dashboard tracking bug severity distribution, resolution velocity, and team workload balance

FREELANCE & INDEPENDENT DEVELOPMENT

Full Stack Developer — Remote / Independent Projects

- Designed, built, and deployed 10+ production web applications spanning SaaS, e-commerce, QA tooling, and developer utilities — all open source and live
- Managed the complete product lifecycle independently: requirements, architecture, development, testing, deployment, and documentation

EDUCATION

Bachelor of Science — Information Technology

2020 – 2023

Nadar Mahajana Sangam S. Vellaichamy Nadar College, Madurai, Tamil Nadu

CERTIFICATIONS

ISTQB CTFL — Certified Tester, Foundation Level • Networking Essentials — Cisco Networking Academy • SQL (Advanced) — HackerRank

GITHUB & PORTFOLIO

GitHub: github.com/sivaprakashtech — 15+ repositories, 10+ deployed applications | **Live:** GrowthPilot-AI, Playwright Dashboard, ShopFlow-Pro, WiFi-Analyzer-Pro, DevForge on Vercel & Render