

RISHOB GUHA PATRA

Automation & AI Engineer · Full-Stack / Front-End · Forward Deployed Engineering

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Automation and AI engineer with 8+ years shipping production systems across web, mobile, desktop, and embedded platforms. At AT&T / Cricket Wireless, designed and built an end-to-end quality-automation ecosystem — AI agent systems (orchestrator + 10 Copilot skills), a TypeScript/Playwright testing platform, a cross-platform Electron desktop app, and full-stack developer tools with adoption telemetry — serving 8 scrum teams on a high-traffic e-commerce site. Deep experience in *LLM orchestration and tool-calling, MCP, RAG grounding, and embedding context-aware AI directly into workflows, workspaces and CI/CD pipelines*. Track record of owning problems end-to-end: stakeholder discovery → architecture → build → deployment → measured adoption. Builds with React, TypeScript, Node.js, Python, and LLM APIs (OpenAI, Claude); hands-on embedded AI/computer-vision experience and founding an assistive-technology charity. Targeting Senior Full-Stack, Front-End, and Forward Deployed Engineer roles.

PROFESSIONAL EXPERIENCE

Senior Software Development Specialist III | Amdocs Client: AT&T / Cricket Wireless *July 2021 – Present*

- **Architected an enterprise test-automation platform** (TypeScript/Node monorepo) integrating Playwright, axe-core, Lighthouse, and screen-reader automation (GuidePup) — 6 reusable CLI tools and 5 timezone-aware scheduled jobs — mapping every finding to an enterprise standard and tracing it to the exact source template for audit-ready remediation.
- **Recognized as top 10% performer within the Workforce Solutions** practice and designated AI subject matter expert across 4 client products; selected to mentor junior Associates and shape practice-wide AI adoption standards.
- **Designed an AI agent system** — one orchestrator plus 10 modular GitHub Copilot skills with typed I/O contracts, grounded on curated trusted sources (RAG) — automating scans, standards-cited code-fix proposals, SEO/GEO analysis, and Azure DevOps Boards/Pipelines queries.
- **Shipped GenAI quality agents into Azure DevOps CI/CD pipelines** that autonomously review pull requests for semantic HTML, ARIA, and design-system compliance — LLM rule engines that interpret DOM structure and component intent instead of static linting — across two mobile apps and one web platform.
- **Built a cross-platform Electron desktop QA app** (Windows + macOS) with a no-code Record → Test → Fix → Report workflow: one recorded user flow replays through 5 parallel analysis lanes (axe, Playwright, screen reader, JS contract, Lighthouse / Core Web Vitals) with one-click Azure DevOps bug filing — enabling non-technical QA to run full automated coverage.
- **Developed and deployed a full-stack developer assistant** (front-end + Node/TypeScript REST back-end + MongoDB) to enterprise infrastructure, designing a telemetry schema for usage and suggestion-adoption metrics that proved ROI to leadership across iterative feedback-driven releases.
- **Authored the program-increment testing strategy for 8 scrum teams**, consolidating 8 test types into a persona-driven “2 apps + 1 platform” architecture with GitHub Actions CI/CD and agentic test generation — preventing tool sprawl across the org.
- **Automated knowledge engineering:** built authenticated Playwright web scrapers that converted a 57-page design system and internal standards into machine-readable knowledge bases powering AI-grounded engineering guidance.
- **Ran discovery-to-solution loops with real users:** partnered with Product and SMEs on UAT with assistive-technology users (JAWS/NVDA/VoiceOver), translating field feedback into measurable fixes; led front-end platform modernization and company-wide engineering workshops — recognized as the org’s go-to engineer for AI adoption.

Software Development Engineer II | Infosys Limited Client: CITIBank *May 2020 – July 2021*

- Built a React + Node.js dashboard consuming REST APIs for a power-grid maintenance application at CitiBank — responsive components, charts, and form flows end-to-end.
- Coordinated 50+ distributed engineers and testers across a KYC compliance program (HP ALM), owning delivery alignment across teams.
- Applied Selenium/TestNG test automation to validate UI functionality and release reliability.

Application Developer | SOCH App *Dec 2018 – May 2020*

- Built cross-platform iOS/Android UI for mental-health apps, cutting feature delivery time by 50% while improving UX responsiveness.
- Integrated EEG IoT device data streams into mobile UI visualizations and implemented API handling, authentication, and cloud messaging (Firebase).
- Designed and built a military geospatial dashboard (Angular 6/7, Leaflet.js) with custom GeoJSON overlays and map controls, from UI/UX design (Adobe XD) through implementation.

INDEPENDENT PROJECTS

3Netra.ai — AI-Powered Assistive Technology for the Blind | Founder, 3Netra LLC *Ongoing*

- Designed and built an end-to-end assistive system — smart glasses + processing pod + audio output — integrating real-time computer vision, object detection, and depth sensing on embedded hardware (ROS2, ESP32), owning it from architecture through field testing with visually-impaired users.
- Building an Android companion app with wake-word-activated, multimodal AI chat (image and video prompting against an LLM) for real-time scene understanding; authored the full user manual and installer test protocol governing hardware handoff to end users.
- Solved the complete physical-deployment stack — sensor integration, on-device inference constraints, power/wiring, and a non-technical end-user interface — the same 0-to-1, hardware-meets-software problem space as forward-deployed engineering.

TECHNICAL SKILLS

Languages	JavaScript, TypeScript, Python, Java, C++, HTML, CSS, Shell
AI / LLM	LLM orchestration & tool-calling, AI agents & skills (GitHub Copilot, Claude, MCP), RAG / trusted-source grounding, prompt & rule-engine design, agentic test generation, OpenAI, Ollama, Arize LLM Model Fine-tuning.
Full-Stack	React, Angular (6/7), Node.js, Electron, Nunjucks/Eleventy, REST API design, MongoDB, SQLite, Oracle DB, Firebase, design systems
Automation / Testing	Playwright, axe-core, Lighthouse, GuidePup, Selenium (Java), TestNG, Jest, authenticated web scraping, node-cron scheduling, record-and-replay
DevOps / Cloud	Azure DevOps (Boards + Pipelines), GitHub Actions, Jenkins, SonarQube/SonarCloud, Git, npm workspaces, Vite/Webpack, Azure DevOps CLI, Frog Artifactory Management
Accessibility	WCAG 2.1/2.2 AA, ARIA, JAWS/NVDA/VoiceOver, 5 years accessibility engineering experience
Embedded / HW	ROS2, Arduino, ESP32, RaspberryPi, OrangePi, computer vision, depth sensing, sensor integration, 3D printing, CAD OnShape Software, Rapid prototyping
Process	Agile (Scrum/Kanban), PI/roadmap planning, persona-driven architecture, stakeholder alignment

EDUCATION & CERTIFICATIONS

- **B.S. in Software Engineering** — Florida Institute of Technology
- Scaled Agile 5.0 (Leading SAFe) · PSM I · Selenium Advanced Automation Tester · Global Agile Developer · BDD Using Cucumber · Infosys Certified Software Programmer ·

LEADERSHIP

- **Kiohub** — Lead UI/UX Developer; managed an 8-person dev team and client delivery for 15+ accounts.
- **QA Community of Practice** — led org-wide CoP at AT&T/Cricket; BWW Leadership Training Program.
- **B.E.S.T. Medical Device** Led a 6-person team through design and fabrication of a medical device for ADHD/anxiety, owning technical decisions and cross-functional coordination from concept to working prototype.