

Rishob Patra



AI ENABLED SOFTWARE DEVELOPMENT ENGINEER

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PROFESSIONAL SUMMARY

AI Engineer with 8+ years shipping production software and a consistent pattern of joining complex client engagements cold, identifying the highest-leverage AI opportunity, and delivering within the first quarter. At Amdocs, designed and shipped the organization's first fully autonomous AI accessibility remediation pipeline — Playwright + Axe API + MCP Server + Guidepup + MongoDB + LLM — turning multi-day manual fix cycles into same-day prod-ready automated remediation with programmatic screen-reader validation. Hands-on with OpenAI, Anthropic Claude, MCP protocol, LangChain, and multi-modal LLMs. Built 3Netra, an open-source AI assistive wearable that integrates OpenAI VLMs in a Kotlin production app and an Orange Pi O 2W embedded build (Python) with VLM, OCR, emotion detection, geolocation, and SOS — proving end-to-end AI product ownership from embedded hardware to production mobile app. Former Infosys alumni; positioned to contribute immediately to GenAI practice engagements.

SKILLS

GenAI / LLM

OpenAI API, Claude SDK, MCP, tool calling, prompt work, RAG flows, LangChain, Ollama, Copilot

AI Frameworks

OpenCV, DepthAI, YOLOv8, PyTorch, ROS2 Humble, SLAM, VLM, OCR, emotion detection

A11y / Testing

Playwright, Axe API, Guidepup, WCAG AA, ARIA, Lighthouse, Wave, Selenium, TestNG

Data

MongoDB, Firebase RTDB, NoSQL, REST design

Languages

Python, JavaScript/TypeScript, Java, C/C++, Bash

DevOps / Cloud

Azure DevOps, Jenkins, Git, Azure, Firebase, Docker

Embedded / IoT

ESP32, ROS2, IMU calibration, OAK-D, Raspberry Pi, Arduino

WORK EXPERIENCE

Amdocs | Front-End Engineer III / GenAI Practitioner — AT&T / Cricket Wireless**

July 2021 – Present*

- Developed an AI Accessibility Remediation Framework, automating the fix pipeline:
 - Utilized Playwright CLI for crawling and Axe API for WCAG violation detection.
 - MCP Server structures findings for LLM, generating targeted ARIA/DOM/CSS fixes.
 - Guidepup automates NVDA and JAWS to validate fixes in real-time.
 - MongoDB tracks violations, AI fix confidence, and audit trails.
- MCP Server architecture provides live DOM snapshots and structured tool-calls, reducing false-positive suggestions by over 60%.
- MongoDB schema enables deduplication and surfaces recurring violation patterns for batch remediation and compliance reporting.
- Deployed a GenAI PR review agent, reducing defects by approximately 30% across platforms.
- Designed an LLM rule engine that interprets live DOM, cutting false-positive alerts by over 50%.
- Established an AI-in-CI pattern for quality checks at merge time, shifting defect discovery left in the SDLC.
- Integrated Guidepup into the CI pipeline, automating JAWS/NVDA regression tests and eliminating manual dependencies.

Infosys Limited | Software Development Engineer — CitiBank / Utilities**

May 2020 – July 2021*

- Parachuted into CitiBank KYC compliance engagement without prior financial domain context. Coordinated over 50 distributed engineers and testers in HP ALM within 30 days, delivering the regulatory deadline with 100% requirements traceability and zero critical escapes.
- Built and deployed a Python 3 NLP concierge robot using proprietary AI APIs, marking the organization's first AI-to-production delivery and proving the viability of conversational AI for enterprise automation.
- Shipped a React + Node.js power-grid dashboard integrating 8 REST endpoints, delivered to production in less than a 10-week sprint on an unfamiliar codebase.

WORK EXPERIENCE

SOCH App | Application Developer — Mental Health / IoT

Dec 2018 – May 2020*

- Built a real-time EEG biometric IoT pipeline: headband stream to Firebase cloud function processing to mobile visualization at sub-200ms latency, achieving the first IoT-ML integration in the product.
- Delivered an iOS + Android app, cutting the feature delivery cycle by 50% through a shared API service layer and component abstraction.

Skymanatics | Software Analyst — Defense / Geospatial**

April – August 2019*

- Embedded in a defense-adjacent GIS engagement with no prior mapping experience, delivered an Angular + Leaflet.js military dashboard with Azure REST CRUD on time and with zero scope creep.

EDUCATION

Florida Institute of Technology

Bachelor of Science in Software Engineering, 2020

EMERGING TECHNOLOGIES

- ****Agentic AI Remediation Pipeline****: Utilizes Playwright, Axe API, MCP Server, Guidepup, and MongoDB for a complete detect-fix-validate-ship cycle, all accomplished on the same day with no human intervention.
- ****LLM Orchestration and Tool Calling****: Employs MCP Server as a structured context layer, enabling model reasoning based on UI intent rather than raw syntax.
- ****Proficiency****: Experienced with OpenAI, Claude/Anthropic SDK, Codex, Copilot, and Ollama for managing both enterprise and local LLM workflows.
- ****AI-Powered Assistive Tech (3Netra)****: Developed a Kotlin-based production Android app featuring OpenAI VLM for real-time scene narration. The in-house Orange Pi 0 2W embedded build (Python) includes VLM, OCR, emotion detection, live geolocation, and SOS emergency alerting.
- ****Embedded AI (Pyatra Droids)****: Integrates OpenCV and DepthAI pipelines, ROS2 SLAM, face recognition, gesture tracking, and GPT-4 REST API on custom robotics hardware.

VOLUNTEER EXPERIENCE

3Netra — AI Smart Glasses for the Visually Impaired 2022 – Present Volunteer Founder & Lead Engineer*

- Conceived and shipped two versions of an AI assistive wearable from scratch — a production Android app and a custom embedded hardware build — providing real-time scene understanding, text reading, and safety features for visually impaired users.
- Built a native Kotlin Android application integrating OpenAI Vision Language Models (VLMs) for real-time scene narration and contextual awareness, with <2 seconds end-to-end processing.
- Engineered a low-cost custom hardware version using Orange Pi 0 2W with a full Python AI stack offering VLM scene description, OCR for text reading, emotion detection, live geolocation, and one-touch SOS emergency alerting.
- Integrated SOS & geolocation APIs to broadcast the user's live coordinates to emergency contacts upon hardware button press, a critical safety feature designed with real user input from the visually impaired community.
- Developed an OCR pipeline to read printed text aloud in real time and implemented emotion detection for informing users of the emotional context of faces in the scene.

Pyatra Droids — Autonomous Hospitality Robot Dec 2022 – Present Volunteer Engineer*

- Designed an autonomous service robot integrating SLAM (ROS2 Humble), calibrated IMU + OAK-D stereo camera sensor fusion for navigating novel environments without maps.
- Utilized GPT-4 REST API for natural-language task assignment and multi-turn guest interaction.
- Implemented OpenCV + DepthAI pipelines for real-time obstacle avoidance, face recognition, and gesture detection, achieving <150ms inference latency on edge hardware.
- Developed a dual-language architecture using C/C++ for real-time SLAM path planning and Python for rapid ML prototyping, aligning with industry robotics standards.

CERTIFICATIONS

- Scaled Agile 5.0: Leading SAFe
- PSM I (Professional Scrum Master I)
- Introduction to Cloud Computing
- Continuous Testing in DevOps
- IC BDD Using Cucumber
- IC Selenium Advanced Automation Tester
- Infosys Certified (IC) Software Programmer