

NICKOLAS J. S. LIVERO

Software Engineer | Full Stack, Cloud, DevOps, Flutter, Android QA, Python, TypeScript, AWS

Manaus, Amazonas, Brazil - Open to remote international roles

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Portfolio: <https://nickolaslivero.github.io/>

PROFESSIONAL SUMMARY

- Software Engineer with hands-on experience since 2022 delivering web, mobile, backend, cloud, QA automation, Android validation, and AI-enabled systems for production and R&D environments.
 - Built and operated B2B systems end to end: frontend, backend APIs, relational databases, AWS, DNS, CDN, load balancing, Docker, Linux, release support, homologation, and production troubleshooting.
 - Strong generalist profile across Flutter/Dart, Android tooling, Python/FastAPI, pytest, SQLAlchemy, TypeScript/JavaScript, React/Next.js, Node.js/NestJS, PostgreSQL, MySQL, Docker, Linux, REST APIs, ERP integrations, and AWS.
 - Hands-on DevOps experience with EC2, ECS, ECR, S3, Route 53, CloudFront, Application Load Balancer, CloudWatch, IAM, Nginx reverse proxy, Tailscale VPN, Ubuntu Server, Azure DevOps, Jenkins, Gerrit, CI/CD workflows, and self-hosted homologation.
 - Mobile QA background with Python automation, UI Automator, ADB, Android Studio, XML/widget inspection, physical device validation, regression testing, and 400+ automated test cases.
 - Business impact: reduced manual testing effort by 60%, reduced client manual processes by up to 70%, and built cost-conscious infrastructure to avoid duplicating cloud environments.
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TECHNICAL SKILLS

- Languages & Frameworks: TypeScript, JavaScript, Node.js, NestJS, Express.js, Python, FastAPI, Flask, SQLAlchemy, Django exposure, Dart, Flutter, React, Next.js, Tailwind CSS, SQL, Java, Kotlin, Gradle exposure, Go basics, C++ fundamentals, HTML, CSS.
 - Backend, APIs & Data: REST APIs, Swagger/OpenAPI, JWT authentication, integrations, automation services, ERP-adjacent workflows, TOTVS Protheus contexts, experimental MCP tooling, PostgreSQL, MySQL, Knex, Prisma, relational modeling, migrations, Firebase, Supabase, AWS S3 integrations, data processing, query debugging, and business-rule validation.
 - Frontend, Mobile & Android: Flutter Web, Flutter Android, Dart, React, Next.js, responsive UI, Android Studio, Android app maintenance, Java-to-Flutter migration, tablet workflows, ADB, UI Automator, XML hierarchy inspection, Android/Kotlin tooling exposure, Gradle exposure, introductory AOSP exposure.
 - Cloud/DevOps: AWS, EC2, ECS, ECR, S3, Route 53, CloudFront, Application Load Balancer, IAM, CloudWatch, Docker, Docker Compose, Linux, Ubuntu Server, Nginx reverse proxy, Tailscale VPN, DNS, CDN, CI/CD, Azure DevOps, Jenkins, Gerrit, PowerShell, Infrastructure as Code and Networking as Code concepts, production and homologation environments.
 - Testing, QA & AI: Python QA automation, pytest, Jest, ts-jest, Supertest, UI Automator test cases, regression suites, validation workflows, Playwright, Cypress, Flutter Test, LLM-assisted automation, LangChain, LangGraph, agents/tools, RAG, fallback, OpenAI/Gemini API concepts and workflows, embeddings, prompt engineering.
 - Data, ML & R&D: NumPy, Pandas, TensorFlow/Keras fundamentals, OpenCV/computer vision, confusion matrix, classification, model validation, data processing, Solidity/Web3, ESP32/MQTT, and embedded fundamentals in academic/R&D contexts.
 - Collaboration, Infrastructure & Hardware: Git, advanced Git workflows, pull requests, Scrum, Kanban, Agile practices, Linux/Windows installers, Inno Setup, Linux server setup, local lab environments, notebook hardware maintenance, RAM upgrades, SSD installation, CPU replacement, cleaning and troubleshooting for repurposed hardware.
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PROFESSIONAL EXPERIENCE

Full Stack Software Engineer and Cloud Developer

IPENA Consultoria / Independent Contractor - Manaus, Brazil

Mar 2024 - Present

- Delivered production software for a B2B industrial software house focused on ERP consulting, TOTVS Protheus environments, API integrations, custom web/mobile systems, and operational support.
- Built and launched the PEDLOG/iCheck payroll and administrative system, owning Flutter/Web frontend work, backend APIs, relational database setup, deployment, DNS, CDN, load balancing, Docker, Linux operations, and production support.
- Improved iCheck/PEDLOG Flutter workflows for payroll and administrative use cases, including frontend behavior, PDF/reporting flows, business rules, validation, troubleshooting, and release support.
- Worked on the iCheck/PEDLOG backend using Express, TypeScript, Knex, PostgreSQL, Swagger, Jest, ts-jest, Supertest, controller/service/provider tests, mocks, and business-rule validation.
- Building i-repos, an internal Android app management and distribution system, with a NestJS backend, Swagger/OpenAPI, JWT, Prisma, modules/controllers/services, tests, and an administrative frontend.

- Deployed production workloads on AWS using ECS, ECR, EC2, S3, Route 53, CloudFront, Application Load Balancer, Docker, IAM, CloudWatch, and Linux-based operational workflows.
- Built a self-hosted homology environment using Ubuntu/Linux, Docker containers, Tailscale VPN, EC2, Route 53 subdomain configuration, and Nginx reverse proxy to validate releases without exposing the home network or duplicating cloud infrastructure costs.
- Used Azure DevOps, Jenkins, Gerrit, Git workflows, pull requests, PowerShell, and installer-related workflows while supporting IPENA/Technos delivery and legacy system operations.
- Repurposed and maintained local lab hardware for infrastructure use, including RAM upgrade, SSD installation, CPU replacement, cleaning, and troubleshooting on a Lenovo G400s notebook.
- Integrated APIs and data workflows for ERP-adjacent industrial operations, reducing manual client processes by up to 70% and improving operational data consistency.
- Delivered MVPs in under 30 days across Flutter, Python/FastAPI, TypeScript, Next.js, PostgreSQL, Firebase, Supabase, Docker, and AWS.
- Supported Flutter and Android maintenance for managed tablet environments, including ADB-based troubleshooting and internal app update workflows for enterprise devices.
- Implemented LLM-assisted automation workflows using prompt engineering, WhatsApp integration, data processing, and AI-supported validation.

Python QA Automation and AI Intern

INDT - Manaus, Brazil

Jun 2023 - May 2025

- Developed Python automation pipelines for mobile systems, regression testing, exploratory testing, internal validation workflows, and QA execution support.
- Automated 400+ test cases and internal processes, reducing manual testing effort by 60% and improving repeatability for mobile QA validation.
- Used UI Automator to create Android automated test cases that inspected the screen XML hierarchy and located widgets through unique attributes such as resource id, layout attributes, coordinates as fallback selectors, or stable UI metadata.
- Worked with Android Studio, physical devices, device-side validation workflows, troubleshooting using ADB, introductory AOSP exposure, and mobile platform fundamentals during QA and validation activities.
- Supported Linux environments, networking configurations, VPN automation, distributed team support workflows, and CI/CD-oriented validation processes.
- Used pytest and Cypress in INDT validation workflows and worked with code versioning, review, and CI/CD using Gerrit, Jenkins, Git, pull requests, and agile delivery practices.
- Worked with AI models for data analysis, classification, and QA validation tasks, connecting automation outputs to technical decision-making.

R&D Scholarship Holder - Embedded Systems

State University of Amazonas (UEA) - Manaus, Brazil

Jun 2022 - May 2023

- Migrated legacy Android applications from Java to Flutter, improving maintainability and enabling cross-platform delivery.
- Built React.js dashboards integrated with Python computer vision modules for industrial monitoring and embedded systems contexts.
- Used NumPy, Pandas, TensorFlow/Keras fundamentals, confusion matrix, classification, and model validation in coursework and R&D projects.
- Delivered functional cross-platform prototypes for research, mobility, industrial workflows, and computer vision use cases.

SELECTED PROJECTS

- PEDLOG/iCheck Payroll and Administrative System: production Flutter/Web business system with backend APIs, PostgreSQL, Docker, AWS ECS/ECR/EC2, CloudFront, Application Load Balancer, Route 53, Linux operations, PDF/reporting workflows, and production support. Live: <https://administracaopedlog.ipenaconsultoria.com.br/>
- iCheck/PEDLOG Backend: TypeScript/Express API with PostgreSQL, Knex, Swagger, Jest, ts-jest, Supertest, controller/service/provider tests, mocks, and business-rule validation.
- Self-Hosted Homology Infrastructure: Ubuntu/Linux server installed on repurposed notebook hardware, Docker containers, Tailscale VPN, EC2, Route 53 subdomain routing, and Nginx reverse proxy to validate releases without exposing the home network or duplicating AWS cost.
- Internal Tablet Update and Android Support Workflows: Flutter/Android maintenance, ADB-based troubleshooting, app update flow support, managed tablet operations, and Android tooling for enterprise device environments.
- i-repos - Internal Android Distribution Hub: in-progress system for managing apps, versions, rollouts, devices, artifacts, and authentication using NestJS, Swagger/OpenAPI, JWT, Prisma, TypeScript, tests, and an administrative frontend.
- Protheus/TOTVS MCP Tooling: experimental personal learning and prototyping project exploring ERP-adjacent automation, Protheus/TOTVS support workflows, AI-assisted command interfaces, integration patterns, and tool design.
- Confidential AI WhatsApp Bot Freelance Project: short engagement in September 2024 building automation flows with LangGraph, LangChain, agents/tools, RAG, fallback handling, Gemini/OpenAI APIs, integrations, and conversational workflows. Source code and client details remain private due to confidentiality.

- SBIE 2024 LLM Accessibility Research: published paper on a voice and LLM-based virtual assistant for visually impaired students. Link: <https://sol.sbc.org.br/index.php/sbie/article/view/31461>
 - Flutter Legacy Migration - Callidus: migrated Java Android workflows to Flutter/Dart with cross-platform architecture and REST API integration. Code: <https://github.com/nickolaslivero/Flutter-Project---Callidus>
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EDUCATION

Bachelor's Degree in Information Systems
State University of Amazonas (UEA), Manaus, Brazil - 2021 to 2025

CERTIFICATIONS

Flutter Development - Alura | Introduction to CyberSecurity - Cisco | Linux Essentials - Alura | Agile Methodologies: Scrum, Kanban, XP - Alura | IoT Applications - Samsung Ocean | LGPD Fundamentals - Fundacao Bradesco

LANGUAGES

Portuguese: native | English: advanced, comfortable in technical interviews and remote collaboration | Spanish: intermediate