

Alain Solomon

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PROFESSIONAL SUMMARY

Software Developer with 3+ years of full-stack engineering experience leading mission-critical platforms from pilot to national scale across government, healthcare, and education sectors. Proven track record in architecting and delivering production systems serving tens of thousands of users across 10+ countries. Experienced in backend API development, data pipeline engineering, cloud deployment, and AI agent integration.

TECHNICAL SKILLS

Programming Languages:	SQL, Python, Java, C#
Backend:	Spring Boot, Django, NestJS, .NET
Frontend & Web Dev:	Next.js, React, React Native, WordPress
Databases:	MySQL, SQLite, PostgreSQL, Supabase
Deployment & Cloud:	AWS (EC2, ECR), Google Cloud, Docker, GitHub
Project Management:	ClickUp, Trello, Asana
Data & Analytics:	Pandas, NumPy, Scikit-learn, Power BI, ELK Stack, ELT Pipelines
AI & Agents:	LangChain, Anthropic SDK, OpenAI SDK, Prompt Engineering
Tools:	Microsoft Suite (Excel, SharePoint), Miro, Google Apps Script

EDUCATION & CERTIFICATIONS

Bachelor's degree in Computer Science, University of British Columbia Okanagan, Canada	Apr 2027
Diploma in Computer Science, Institut de Formation Apostolique de Kimihurura Kigali, Rwanda	July 2023
Azure AI-900 Professional Certificate, Microsoft	Sept 2025
Data Analyst Professional Certificate, IBM	Sept 2025

PROFESSIONAL EXPERIENCE

Lead Software Engineer, Logiic Software Services Ltd Kigali, Rwanda	Nov 2022 - Jan 2025
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Served as lead developer under the CTO across all major product lines, owning end-to-end architecture, implementation, training, and capacity building from pilot to national-scale deployment across government, healthcare, and education sectors.

PROJECTS

Bento AI Agentic E-Commerce Shopping Platform

- Built a full-stack agentic AI platform using Python, FastAPI, Next.js, PostgreSQL, and Docker, transforming natural-language shopping goals into structured, budget-aware product recommendations.
- Designed a multi-agent LLM orchestration architecture for planning, product discovery, semantic evaluation, and workflow execution, combining AI reasoning with deterministic business logic.
- Developed REST API and UCP commerce integrations with Shopify Global Catalog and multi-merchant providers through a provider-agnostic architecture for scalable product discovery.
- Engineered product-ranking and basket-optimization algorithms to evaluate multi-product requirements, enforce budget constraints, and generate personalized product comparisons.

TrueNorth AI Agentic Patient Engagement & Healthcare Platform

- Architected a full-stack agentic AI healthcare platform using Python, FastAPI, Next.js, LangGraph, and PostgreSQL for appointment booking, symptom triage, medical-report interpretation, reminders, and queue tracking.
- Built stateful multi-agent workflows with LangGraph, structured LLM routing, interrupt/resume handling, and channel-aware responses across web and WhatsApp.
- Integrated OpenMRS/Bahmni REST APIs through an MCP server, enabling AI workflows to securely access patient, appointment, lab, prescription, and queue data through standardized tools.
- Designed RAG and event-driven pipelines using pgvector, OpenFDA data, ActiveMQ, and LLM-based medical reasoning to deliver grounded medication explanations and proactive patient notifications.

Quality Assurance Management Information System

- Architected and led full-stack development of Rwanda's national school inspection and quality assurance platform, deployed across hundreds of schools for NESA.
- Engineered offline-first data collection and synchronization workflows, enabling reliable inspection processing in low-connectivity environments.
- Built real-time KPI dashboards, data visualizations, and automated workflows, reducing school inspection processing time by 50%.

School Accreditation Application

- Built a full-stack web application for digital school accreditation workflows across Rwanda, reducing application processing time by 50%.

- Implemented email verification, document management, real-time status notifications, and digital certificate issuance with 99% notification delivery success.

OpenMRS & Bahmni Healthcare IT Implementations

- Led end-to-end OpenMRS/Bahmni EMR implementations, including deployment, configuration, workflow setup, go-live support, and daily production support. Managed implementation activities in Asana across a multi-tenant platform supporting up to 20 healthcare facilities.
- Configured and supported EMR workflows across medical records, laboratory, pharmacy, billing, claims, and medical imaging. Helped ensure clinical and administrative workflows operated reliably within one integrated healthcare system.
- Delivered remote end-user training to doctors, clinic staff, and administrative officers on EMR workflows and system use. Provided ongoing troubleshooting and user support after deployment to resolve workflow and operational issues.
- Supported production deployments, upgrades, and system customizations across Rwanda, Botswana, and Guatemala. Coordinated implementation activities and issue resolution across distributed healthcare teams.
- Developed REST API and interoperability integrations connecting OpenMRS/Bahmni with pharmacy, laboratory, billing, imaging, claims, and external healthcare services. Improved data exchange across clinical and administrative systems.

Digital Situation Room (DSR) Multi-Sector Government Intelligence Platform

- Engineered data validation and business-rule logic across 14+ government datasets, including duplicate detection, temporal validation, and dynamic range checks.
- Built dynamic data-entry workflows and real-time KPI dashboards spanning education, health, security, and social programs across four administrative levels.
- Developed batched data ingestion pipelines in Ruby to synchronize high-volume datasets with Elasticsearch, Logstash, and Kibana.
- Authored technical documentation and trained government IT teams to maintain and extend the production platform.