Douglas Byfield *AI & Software Engineer*

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PROFILE

AI & Software Engineer with 5+ years building production software and automation for finance, banking and geospatial teams. Builds AI systems end to end, from ML models and LLM fallbacks to the APIs and workflow automation that put them in front of real users, and finds the quiet failures in live systems that others miss.

PROFESSIONAL EXPERIENCE

MC Systems Limited (JN Group) 01/2025 – Present | Kingston, Jamaica
AI Lab Engineer, AI Centre of Excellence (previously Innovation Analyst)

- Designed and deployed a GL code classification service trained on 47,000+ ERP transactions (scikit-learn, TF-IDF similarity, GPT-4o-mini fallback), served through FastAPI on Azure and exposed as a Power Automate connector; **recognized at the company all hands**.
- Built an invoice matching engine with confidence gating that lifted agreement with human coding from about 50% to **over 77%**, backed by a blind evaluation harness that kept silent false positives under 0.5%.
- Restored a production invoice pipeline (Power Automate, data gateway, SQL Server, ERP API) after **five weeks of downtime**; invoices now post fully coded with department splits and no manual entry.
- Shipped a QR maintenance reporting system **live across 120 properties**, and an AR reminder pipeline with idempotent sends.
- Building an agentic treasury assistant on LangGraph and Azure AI Foundry, with its tools served over MCP.

SpurrTech 2024 – 2025 | Kingston, Jamaica
Software Engineer

- Led the technical build of an eSigning integration for a Jamaican financial institution, taking it from an Adobe Sign OAuth 2.0 proof of concept to **59 banking forms** connected to core banking.
- Designed configuration driven .NET Core middleware on Azure with 1,000+ field mappings, webhooks, Hangfire jobs and Polly retries, so new forms ship as configuration rather than code.
- Designed the target architecture (API layer, RBAC, network segmentation) for migrating a client's desktop LMS to the web.

Mona Geoinformatics Institute 11/2022 – 09/2023 | Kingston, Jamaica
Software Developer

- Built Django REST and React GIS platforms with optimized geospatial APIs, improving data access by **40%**, plus reusable Next.js map components shared across client projects.
- Built an address verification service using Geoapify geocoding to match and geolocate Jamaican addresses.

SELECTED PROJECTS

- **Gunshot Detection System** · gundetector.netlify.app (2023): **won the national JAIA AI hackathon** with a TensorFlow model that detects and maps gunshots.
- **Rebuild JA** · rebuild-ja.com (2025): mapping platform for Hurricane Melissa relief and rebuild progress.
- **EasyRentCollect** · easycollectja.com (2025): rent collection platform for Jamaican landlords, live in production.
- **Ignition Sync** · ignitionsync.com (2026): vehicle diagnostics app that reads any OBD scanner and finds parts that fit.

EDUCATION

University of the West Indies, Mona 09/2017 – 04/2021
BSc, Electronics and Computer Systems Engineering, GPA 3.3/4.0

.NET Full Stack Bootcamp *Certificate of Completion* 07/2022 – 12/2022

SKILLS

AI & Machine Learning
LLM applications, AI agents, MCP, RAG, scikit-learn, TensorFlow, NLP, model evaluation, Azure ML

Automation, Cloud & Data
Power Automate, Power Platform, AI Builder, Adobe Sign, Azure, AWS, Docker, CI/CD, SQL Server, PostgreSQL

Languages & Frameworks
Python (FastAPI, Django, LangGraph), TypeScript, C# / .NET Core, SQL, PowerShell, React

Leadership & Certifications
IEEE UWI Student Branch Chair (150+ students), UWI Electronics Club President, Microsoft PL-900, PSM I