ADJETEI MARTEY

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PROFESSIONAL SUMMARY

Software engineer with an MSc in Artificial Intelligence (Distinction) building production ML systems and LLM-powered tools — from recommendation engines serving a live customer base to RAG pipelines, tool-calling agents, and computer vision models shipped as working demos.

TECHNICAL SKILLS

- **Programming Languages:** Python, TypeScript, C++, Java, SQL
- **ML/AI:** PyTorch, TensorFlow, Scikit-Learn, HuggingFace, Vercel AI SDK, RAG, agentic tool-calling, embeddings
- **Cloud & Infrastructure:** AWS, Google Cloud, Microsoft Azure, MongoDB, Docker, Kubernetes
- **AI Coding Agents:** Claude Code (daily use for building, refactoring and automating workflows)
- **Core Expertise:** Machine Learning, LLM Application Development, NLP, Database Optimization, API Development

PROFESSIONAL EXPERIENCE

CTO | Rumate — Apr 2026 – Present
- Own data, scoring and ML at a startup that scores Toronto rental buildings
- Built the Toronto Open Data (CKAN) ingestion pipeline for 3,000+ buildings, with append-only inspection history
- Built the People's Score pipeline over five public sources, using dual-LLM (Claude Haiku + Qwen) review classification to filter solicited reviews; ran the first 100-building ward batch

Senior Software Engineer | Nguvu Global Ltd — 2022 – 2026
- Led design and deployment of recommendation-system models for customer targeting on transactional data, serving a 10K-customer base
- Built and shipped a prototype customer support chatbot powered by Anthropic's API — first GenAI integration into the product
- Reduced database query times by 40% by adding indexes to high-traffic queries
- Cut production bugs by 35% by introducing mandatory code review and regular change logging

Software Engineer | Nguvu Global Ltd — Sept 2019 – 2022
- Designed and shipped the initial recommendation-system model for customer targeting using transactional data, achieving a 30% increase in customer acquisition and 55% revenue growth in the first 3 months post-launch, confirmed via before/after sales comparison
- Built customer-facing platform features improving scalability for a 6-person engineering team supporting a growing customer base

PROJECTS

docuchat — RAG document Q&A | github.com/saxumatrum/docuchat
- Built a full RAG pipeline: sentence-based chunking, batched embeddings (OpenAI text-embedding-3-small), hand-rolled cosine-similarity retrieval run in the browser, and streamed LLM generation with inline source citations (Next.js, Vercel AI SDK)

TriagePilot — agentic ticket triage | github.com/saxumatrum/triagepilot
- Built a multi-step tool-calling agent that classifies support tickets, searches a knowledge base, and drafts replies, with a full inspectable trace of every tool call and result (Vercel AI SDK generateText + tools + stopWhen)

Extractly — document data extraction | github.com/saxumatrum/extractly
- Built a vision-LLM pipeline turning invoices, receipts, and resumes (image/PDF) into structured, schema-validated JSON via generateObject + Zod, with inline editing and CSV/JSON export

Chest X-Ray Multilabel Classification | github.com/saxumatrum/chest-xray-multilabel
- Fine-tuned DenseNet121 (CheXNet architecture) on NIH ChestX-ray14 for 14-way multilabel pathology classification; BCE loss, per-label AUROC evaluation

Facial Emotion Recognition | github.com/saxumatrum/fer2013
- Fine-tuned VGG19 on FER2013 with class-weighted loss for 7-way emotion classification: 68.6% accuracy vs 52.7% for a custom CNN (PyTorch, fastai)

EDUCATION

University of Kent, Canterbury

Master of Science in Artificial Intelligence, Distinction (2023)
- Research: Investigated genetic interactions influencing ageing under dietary restrictions using Balanced Random Forest Classification, XGBoost, and Random Forest models

University of Ghana, Legon

Bachelor of Science in Information Technology
- Second Class Honours (2021); research: COVID-19 predictive modelling using ARIMA and LSTM models