

ANDILE MBELE

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PROFESSIONAL SUMMARY

Self-taught, multi-talented engineer with a proven record of delivering high-impact solutions across Data Engineering, Full-stack Software Development, and Automation. Passionate about solving problems through code, with experience in ML, procurement, OSINT, and property marketplaces. Active in the open-source community with 10,000+ contributions and ranking #1 regionally on wakatime (ZW) for the 5th year in a row.

SKILLS & INTERESTS

Technical: Python, Pandas, JavaScript, TypeScript, Django, SQL, React, Node.js, MongoDB, Express, Git, Firebase, REST APIs, System Design, Data Pipelines, Geolocation, ETL Automation, AHP Modeling, NLP, LLMs, NLTK, Speech-to-Text, AI/ML

Interests: AI, OSINT, Hackathons, HealthTech, Data Storytelling, Cloud Systems, Computational Thinking, Entrepreneurship

PROFESSIONAL EXPERIENCE

VECTRA DYNAMICS

Harare, Zimbabwe

Lead Software Engineer

March 2023 – Present

- Built and scaled a full-stack property marketplace, powering 10,000+ property searches with 99.9% uptime.
- Integrated intelligent pattern matching and geolocation, improving search relevance and retention by 30%.
- Redesigned the system architecture to handle a 200% traffic growth with Round Robin Load Balancing, redis caching and Content Delivery Networks (CDNs).
- Lead internal AI adoption, using RAG for customer service, automating KYC and user behavior analytics for upcoming product launches.

DISTRICT 4 LABS

Chicago, Illinois, USA [Remote]

Data Engineer

Sept 2022 – June 2025

- Engineered Python-based Extract-Transform-Load (ETL) pipelines to clean and structure datasets exceeding 40 billion records, achieving 90%+ Personally Identifiable Information (PII) extraction accuracy.
- Automated data workflows (SQL/CSV parsing), reducing manual labor by 80% and processing over 1 million records/hour.
- Leveraged Python, Pandas, and EmEditor to improve throughput and optimize analysis pipelines, cutting processing times by 25% and boosting capacity by 40%.
- Led the end-to-end migration of a 4 TB on-prem warehouse to a cloud-native lakehouse (AWS S3 + Apache Spark + Delta Lake), cutting query latency by 70 % and saving \$120 K in annual compute spend.

SOLUGROWTH

Pretoria, South Africa [Remote]

Lead Software Engineer

Aug 2024 – Dec 2024

- Spearheaded a cloud-native Vendor Decision Engine (Python/Django/PostgreSQL/AWS ECS) that operationalised the Analytic Hierarchy Process (AHP) across 14 weighted criteria, cutting bid-evaluation time 60 %.
- Productised the engine as a reusable Django app and REST API bundle, enabling three new business units to adopt the tool in < 2 days and saving an estimated \$85 k/year in consulting spend.
- Architected micro-service scoring pipelines (Celery + Redis) that ingest >10 k supplier records / hr and publish real-time rankings to a React dashboard used by four procurement teams.
- Built a self-service weighting UI with immutable, time-stamped audit logs that satisfy King IV governance principles and POPIA data-retention rules.

PROJECTS & INNOVATIONS

FinePrint

<https://fineprint.vercel.app>

AI-Powered Contract Analysis & Consumer Protection Platform

- Engineered an NLP/LLM-powered contract-intelligence platform (Claude 4, spaCy, LangChain) that flags hidden fees, predatory clauses, and compliance risks with 92% precision.
- Raised an \$8 000 seed grant from the Alabama Collective Innovation Challenge (top 5 of 200 teams) and secured pilot agreements with two regional credit-union networks.
- Architected a hybrid ML pipeline combining fine-tuned DeBERTa-v3-base transformers with regex pattern matching, enabling multi-label classification across 6+ risk categories with confidence thresholds and severity scoring.
- Developed a production-ready contract-analysis system featuring real-time web certificate verification, chunked document processing (1 000-char overlapping windows), and a FastAPI backend that powers a Chrome-extension UI.

Chat Insights

<https://chatinsights.app>

WhatsApp Chat-Analytics Tool

- Designed and deployed a Python/Pandas/NLTK pipeline that parses exported WhatsApp logs and generates interactive dashboards (Plotly) on message volume, participant activity, and sentiment trends.
- Handles chats of >500 000 messages in under 30 s and exports actionable CSV/PNG reports for community managers and distributed teams.
- Adopted by three student organizations and one SME, informing scheduling changes that raised active-hour engagement by 18 %.

Lumina

<https://vectradynamics.comp>

AI Healthcare Assistant for Medical Triage & Information

- Built a multilingual AI Agent (Python, FastAPI, LangChain, GPT-4o) that delivers symptom triage, treatment advice, and pharmacy referrals in English, Shona, and Ndebele.
- Integrated Twilio WhatsApp Business API and a lightweight React web client, reaching users on low-bandwidth devices.
- Implemented rule-based risk stratification and FHIR-compatible referral payloads, achieving 87 % concordance with nurse hotline decisions in pilot tests.
- Secured \$25 000 seed funding from POTRAZ for “innovation excellence” and partnered with two rural clinics for ongoing clinical validation.

EDUCATION

BULAWAYO POLYTECHNIC

Bulawayo, Zimbabwe

National Diploma in Information Technology

Jan 2018 – Mar 2022

Relevant Coursework: Software Engineering, Data Structures & Algorithms, Object-Oriented Programming, Database Design

EMZINI WE CODE

Bulawayo, Zimbabwe

CS7: Computer Science and Programming Boot Camp

May 2019 – Aug 2019

Relevant Coursework: Dynamic Programming, Functional Programming, Algorithm Optimization, Object-Oriented Design