

Gashaw Demlew

Data Scientist | Machine Learning Engineer | AI Engineer

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Professional Summary

Data Scientist, Machine Learning Engineer, and AI Engineer with 10+ years of software and engineering experience, including 4+ years focused on data science, MLOps, and data pipelines. I build production AI systems for finance, credit risk, NLP, computer vision, agriculture, healthcare, and public-impact workflows, with 6+ years in teaching, research, and mentoring.

Recruiter Snapshot

- Builds end-to-end AI products from data ingestion and model development to API deployment and monitoring.
- Experience spans financial services, MSME credit risk, multilingual NLP, computer vision, and public-impact AI.
- Blends product-facing engineering with teaching, research, and stakeholder collaboration.

Core Skills

- Machine Learning and AI: Scikit-learn, TensorFlow, PyTorch, Transformers, SentencePiece, fine-tuning, RAG, agentic AI
- LLM and GenAI Systems: Gemini, Google ADK, LangChain, retrieval-augmented generation, prompt workflows, multilingual assistants
- MLOps and Deployment: FastAPI, Kubeflow, MLflow, KServe, Seldon Core, Evidently, Docker, GitHub CI/CD, AWS, Google Cloud
- Data Engineering and Analytics: Airflow, Kafka, Spark SQL, ETL, pipelines, data warehousing, Postgres, MongoDB, APIs
- Domain Experience: financial services, MSME credit scoring, agricultural intelligence, NLP for Amharic, and computer vision
- Languages: Python, Java, JavaScript, SQL

Professional Experience

Lead, Data and Insights Analyst - Kacha Digital Financial Service S.C.

Jun 2025 - Present

- Lead data strategy and analytics support for financial products and decisioning workflows.
- Contribute to AI and data products that combine ingestion, scoring, and business reporting.
- Partner with product and engineering teams to turn data into production-ready features and insights.

Senior Data Scientist - Kifiya Financial Technology

Aug 2024 - May 2025

- Designed and delivered alternative credit scoring solutions for collateral-free digital lending.
- Built feature engineering, model development, and MLOps workflows across the machine learning lifecycle.
- Supported deployment and monitoring of predictive systems used by financial stakeholders.

Machine Learning Engineer - Qena Digital Lending, Kifiya Financial Technology

Dec 2022 - Sep 2024

- Developed and deployed scoring and decision-support services for lending workflows.

- Implemented APIs and on-premise deployment patterns for production machine learning systems.
- Contributed to model orchestration, preprocessing, registry, and monitoring activities.

Co-founder and Digital Trainer - Talent-shift Technology Hub

Apr 2020 - Dec 2022

- Co-led digital training and technology enablement activities for learners and teams.
- Supported practical software and data projects through mentoring and hands-on delivery.

Lecturer and Researcher - Jimma University

Jul 2015 - Aug 2023

- Taught, researched, and mentored in computer science, AI, and data-driven systems.
- Built a research foundation that supports practical engineering, experimentation, and publication.

Selected Projects

- **Personal Financial Management AI:** AI-powered financial assistant with chat history, budgets, goals, and transaction workflows.
- **Credit Scoring AI Agent:** Google ADK multi-agent MSME scoring system combining external validation, macroeconomic reasoning, and credit-history comparison.
- **Ethio Smart Farming:** RAG knowledge assistant for Ethiopian agriculture using multilingual policy, research, and news sources.
- **GenAI Ethio Startup Business Advisory:** Startup advisory platform for market validation, policy alignment, and business recommendations.
- **Transaction SMS Extractor:** Automated SMS parsing and categorization for banking and mobile-money transaction data.
- **Audited Financial Statement Extractor:** OCR and document extraction pipeline for audited reports and financial statements.
- **AI Car Detection:** Real-time vehicle detection API for smart-city, parking, and traffic workflows.
- **Amharic NLP Stack:** Semantic parser, tokenizer, word embeddings, ambiguity resolver, and transliterator for Amharic language processing.

Additional Project Coverage

- Personal Financial Management AI: AI assistant for budgets, goals, transactions, and financial chat workflows.
- Credit Scoring AI Agent: Multi-agent MSME credit scoring with API validation, Gemini reasoning, and historical normalization.
- Ethio Smart Farming: RAG assistant for Ethiopian agricultural policies, news, and research in Amharic and English.
- GenAI Ethio Startup Business Advisory: GenAI and RAG platform for startup validation, policy alignment, and recommendations.
- Transaction SMS Extractor: Parses Ethiopian banking and payment SMS messages into structured transaction data.
- Audited Financial Statement Extractor: OCR and extraction pipeline for financial documents and audited statements.
- Merchandise Compliance Checker: Image-based retail compliance checking with annotated outputs and structured summaries.
- AI Car Detection: FastAPI service that detects cars in uploaded images using YOLO-based inference.
- Amharic Semantic Parser, Tokenizer, and Transliterator: NLP tools for Amharic semantic understanding, tokenization, and transliteration.

- Amharic Lexical Ambiguity Resolver and Word2Vec: Context-aware language modeling for Amharic disambiguation and embeddings.
- ETH Business Category Standardize and ETH Regions to Woredas: Data normalization and Ethiopian administrative lookup utilities.
- Polio Image Classification API and Abdominal Disease: Applied medical image classification for field screening and diagnostic support.

Education

M.Sc. in Data and Web Engineering - Addis Ababa University (2016 - 2019)

B.Sc. in Computer Science - Jimma University (2012 - 2015)

Research and Profiles

- Google Scholar: scholar.google.com/citations?user=2Vtu-KsAAAAJ
- LinkedIn: linkedin.com/in/gashaw-demlew-b35865150/
- GitHub: github.com/gashawdemlew
- Hugging Face: huggingface.co/gashudemman/spaces