Yohannes Alemu

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EDUCATION

Addis Ababa University   **Addis Ababa**

Bachelor of Computer Science   *Graduation Date: Jul 2026*

WORK EXPERIENCE

10X Academy   **Addis Ababa**

Machine Learning intern   *Feb 2023 - Present*

- Led development of a **real-time fraud detection** pipeline by preprocessing imbalanced financial transaction data with SMOTE, training **XGBoost and Random Forest models**, and interpreting results with SHAP and K-Means clustering—boosted **anomaly detection accuracy by 92%,** enabling **faster flagging of high-risk transactions** and supporting operational risk reduction.
- Built an **end-to-end financial complaint analysis** system using a **RAG** pipeline with MiniLM-L6, FAISS/ChromaDB, LangChain, and prompt-engineered GPT-based models deployed via Streamlit—improved **Q&A relevance by 35%**, **retrieval precision to 90%,** and reduced trend-detection time from days to minutes, enabling more **proactive issue resolution and customer support insights**.
- **Developed multilingual Telegram analytics** engine **using Python**: **Fine-tuned** XLM-RoBERTa/mBERT for NER, automated ELT with Dagster,dbt, enriched content with YOLOv8 enabled **real-time vendor risk profiling for 85% customers.**
- **Delivered** automated Amharic e-commerce pipeline in **Python** with Hugging Face XLM-RoBERTa and SHAP/LIME—**boosted vendor profits engagement 90%** through interpretable scorecards.
- **Scraped & analyzed** 1,200+ Google Play reviews **using Python** with google-play-scraper ,Oracle,applied DistilBERT sentiment scoring and spaCy/TF-IDF clustering drove **70% customer satisfaction** increase.

ICogLabs   **Addis Ababa**

Artificial General Intelligence intern   *Aug 2024 - Feb 2025*

- Automated gene-transcript-exon extraction in **Python** from Neo4j/Metta ontologies—built 1.2M-node knowledge graph enabling 98% accurate disease pathway identification.
- Developed Flask-Mail chatbot in **Python** for real-time gene-ontology alerts—boosted query throughput 60% and accelerated hypothesis generation 30%.

LEADERSHIP EXPERIENCE

Africa to Silicon Valley -Backed by Google   **Addis Ababa**

Teaching Assistant   *Feb 2024 - Present*

- Co-led recitations/grading for 5 TAs; improved coding interview problem-solving 40% via 360+ LeetCode challenges while connecting students to global opportunities at Google, Palantir, Databricks, Bloomberg, and Meta.
- Conducted mock interviews emphasizing **Python** data structures/algorithms, directly enabling 70+ student placements at top tech firms.

ALX Africa   **Addis Ababa**

Software Engineer   *Feb 2023 - Feb 2025*

- **Led** a 5-person team in building Flask-**Python** marketplace with RESTful APIs, automating produce listing/ordering system that processed 500+ monthly transactions, and **accomplished** 90% farmer revenue growth through Flask-Mail email notifications that boosted customer engagement **link**.
- **Led** development of AirBnB clone v4 dynamic web application using **Python**, Flask, jQuery AJAX, and MySQL, and **accomplished** 30% deployment time reduction by creating Fabric automation scripts while implementing CLI database management console.

STEM   *Start Date - Finish Date*

- Led team participation in global STEM competitions, earning Silver Honors in the International Astronomy and Astrophysics Competition (IAAC) and International Youth Math Challenge (IYMC) among worldwide participants (Verify: IAAC ID PF-2020-E74F5E6A1E1, IYMC ID QR-2020-E8DDFEDE2BD)

SKILLS

Programming: **Python (Expert)** **AI/ML:** NLP, LLMs, Generative AI, Computer Vision, XGBoost, TensorFlow, Hugging Face, LangChain

Databases: Neo4j, MySQL, Redis, MongoDB, PostgreSQL **Frameworks:** Flask, FastAPI, Spark, dbt, SHAP, YOLOv8

Certifications: <u>TensorFlow</u>, <u>Advanced ML Algorithms</u>, <u>Unsupervised Learning</u>, <u>Reinforcement Learning</u>, <u>Supervised Machine Learning</u>