

# BILISUMA TADESSE

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## PROFESSIONAL SUMMARY

AI Engineer and Python backend developer with 3+ years building production systems. Currently designing and shipping LLM-powered applications at Cooperative Bank of Oromia: agentic RAG pipelines, hybrid vector search, and AI workflow orchestration using FastAPI, LangChain, LangGraph, and OpenAI API. Earlier work includes high-scale Python backend systems serving 700+ distributed endpoints. Comfortable across the full delivery cycle: architecture, API design, deployment, and observability. Open to remote roles.

## TECHNICAL SKILLS

**AI & LLM:** LangChain, LangGraph, OpenAI API, HuggingFace, RAG, Agentic Workflows, Prompt Engineering, LangSmith  
**Backend & APIs:** FastAPI, Django, Python, REST APIs, System Design  
**Databases & Vector Search:** PostgreSQL, Qdrant, Pinecone, Supabase, MySQL  
**Cloud & DevOps:** AWS EC2, Docker, Git, Linux  
**Frontend:** React, JavaScript, Tailwind CSS  
**Languages:** Python, JavaScript

## PROFESSIONAL EXPERIENCE

- AI System Engineer – AI Foundry Team** Sep 2025 – Present  
*Cooperative Bank of Oromia* Addis Ababa, Ethiopia
- Architect and ship AI-powered products using FastAPI, LangChain, LangGraph, and OpenAI API
  - Deployed RAGWISE on AWS EC2: production agentic RAG with hybrid search (semantic + sparse keyword via Qdrant), PostgreSQL session state, and LangSmith observability
  - Lead full-stack prototyping (React + Python) and end-to-end system integration, testing, and deployment for internal AI initiatives
  - Collaborated with AI hardware vendor on local-inference POC to evaluate on-premise LLM feasibility
- Software Engineer – Agile Dev Team** Jan 2025 – Sep 2025  
*Cooperative Bank of Oromia* Addis Ababa, Ethiopia
- Built and validated digital application prototypes on Temenos Quantum and Tencent Cloud (TCSAS) platforms
  - Worked directly with vendor engineering teams on technical integration and solution evaluation
- Associate Card Banking Officer – Payment Switch Project Team** Nov 2023 – Jan 2025  
*Cooperative Bank of Oromia* Addis Ababa, Ethiopia
- Built EJSYNC: automated ATM log collection system serving 700+ terminals (Python, Django, React); reduced sync failures by 95%
  - Developed Consolidator App (Python, PySide6): card file processor cutting issue identification from 6–8 hours to minutes
  - Supported implementation of Bank Switch, POS network, and Mastercard/Visa integration
  - Enabled near-real-time EJ availability for reconciliation and dispute resolution teams
- Graduate Trainee – Information Systems** Oct 2022 – Nov 2023  
*Cooperative Bank of Oromia* Addis Ababa, Ethiopia
- Completed rotational program across branch operations, back-office support, and IT infrastructure
  - Provided technical support for internal systems and participated in customer-facing campaigns

## FEATURED PROJECTS

- RAGWISE – Agentic RAG (Production)** | FastAPI, LangChain, Qdrant, PostgreSQL, React, LangSmith, AWS EC2 Apr 2026
- Production-oriented agentic RAG with hybrid retrieval (semantic + sparse keyword search via Qdrant); persistent session state in PostgreSQL
  - FastAPI backend orchestrating LangChain agents; React UI for interactive Q&A
  - End-to-end LLM observability with LangSmith; deployed on AWS EC2 for real-world validation
- PyPilot – AI Coding Agent for VS Code** | FastAPI, LangGraph, OpenAI, TypeScript Feb 2026
- VS Code extension using LangGraph ReAct-style agents for autonomous file read/write/edit
  - FastAPI service orchestrating tool use; streaming responses for live agent feedback
  - Visual diff workflow before writes; supports OpenAI and Groq (Llama) models

- Knowledge Base RAG Assistant** | *Flowise, Supabase, Pinecone, n8n, OpenAI* Sep 2025
- Built end-to-end RAG pipeline with document processing and semantic search in a 24-hour AI Foundry Hackathon; placed 2nd out of 6 teams
  - Integrated Flowise workflows with Supabase and Pinecone; implemented LLM observability with LangSmith
- EJSYNC – ATM Log Automation** | *Python, Django, React, MySQL* Oct 2024 – Apr 2025
- Architected multithreaded Python server handling concurrent log uploads from 700+ ATM terminals
  - Django + React dashboard for real-time monitoring and analytics; reduced sync failures by 95%
- Consolidator App – Card File Processor** | *Python, PySide6* Apr 2024 – May 2024
- Desktop app processing EMV-encoded card embossing files from 700+ branches with custom parser and duplicate detection
  - Reduced issue identification from 6–8 hours to minutes, preventing card duplication errors pre-embossing

## CERTIFICATIONS

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- Associate AI Engineer for Developers** – DataCamp (Feb 2026)
- Introduction to LangGraph (Python)** – LangChain Academy (Feb 2026)
- Introduction to LangChain (Python)** – LangChain Academy (Jan 2026)
- Agentic AI** – DeepLearning.AI (Nov 2025)
- Retrieval Augmented Generation (RAG)** – DeepLearning.AI (Oct 2025)
- Machine Learning Specialization** – DeepLearning.AI (Jul 2025)
- FastAPI Essentials for Python Developers** – CodeSignal (Jul 2025)
- Meta Full-Stack Engineer Certificate** – Meta (Feb 2025)
- Google IT Automation with Python** – Google Professional Certificate (Jun 2024)

## EDUCATION

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- BSc in Computer Science and Engineering** Oct 2017 – Jul 2022  
*Adama Science and Technology University* CGPA: 3.67/4.00, Major GPA: 3.87/4.00