Biruk Jember

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SUMMARY

Full-Stack AI Engineer with 2+ years building end-to-end systems across ML pipelines, REST APIs, data engineering, and production UIs. LLM integration (LangChain, RAG, Gemini, OpenAI), full-stack work in Next.js, Flutter and FastAPI, and systems programming in Rust. Contributor to rust-lang/rust-analyzer.

TECHNICAL SKILLS

AI / ML: LangChain, LangGraph, PyTorch, scikit-learn, MLflow, RAG, Transformers, LLM APIs (Gemini, OpenAI, Anthropic)
Languages: Python, TypeScript, Rust, JavaScript, Dart, C++
Backend: FastAPI, Node.js, PostgreSQL, Supabase, Docker, CI/CD, REST APIs
Frontend: React, Next.js, Tailwind CSS, Flutter
Data: Dagster, dbt, Pandas, NumPy, SQL, Jupyter
Tooling: Git, GitHub Actions, Docker, Kubernetes, pytest, Agile / Scrum, AWS (working knowledge)

EXPERIENCE

AI Engineer, IDEEZA

March 2026 - June 2026 | Addis Ababa, Ethiopia

- Built an internal engineering tool end to end: designed the constraint-based optimization algorithms, did the domain research needed to model the constraints, and built the data collection and visualization layers around them
- Contributed LLM-backed classification and routing components, in Python, to a production AI pipeline

Machine Learning Engineer, iCog Labs

January 2025 - October 2025 | Addis Ababa, Ethiopia

- Contributed 12 merged PRs, +5.4k lines across 117 files, to the port of MOSES, a 10+ year old C++ genetic programming system, to MeTTa for the OpenCog Hyperon architecture, on a 5+ engineer team
- Implemented the BDe scoring system underpinning multivariate dependency learning: four scoring types, log-likelihood via Mercator series expansion, decision-tree split point selection, 30+ test cases
- Worked in MeTTa while the language was under a year old: debugged the toolchain and extracted shared data structures and helpers into the org's meTTa-utils library
- Built the official MeTTa documentation site and interactive playground: 18 tutorial pages with in-browser code execution, adopted as the primary onboarding resource for the Hyperon ecosystem

Open Source Contributor, rust-lang / rust-analyzer

March 2026 | Remote

- Merged PR #21874 into the official Rust toolchain: migrated a code generation assist to AST-aware SyntaxEditor construction, fixing impl block indentation bugs inside nested modules

PROJECTS

Tali | FastAPI, Gemini API, Supabase, PyAnnote, Next.js | private repository

- Co-initiated an AI meeting assistant for Amharic and English; top contributor of 4, authoring the backend pipeline in a single 1.4k-line integration
- FastAPI orchestrating Supabase Storage upload, PyAnnote diarization, ASR transcription, and Gemini for transcript correction and structured summaries, streamed to the frontend over Supabase Realtime

EDA - Shared Expense Tracker | Flutter, Dart, Riverpod, Supabase | github.com/Biruk-gebru/eda-IOU-

- Shipped a Flutter app for splitting expenses in Ethiopian Birr; BFS debt-routing algorithm clears indirect debt chains in a single tap, with a live animated debt graph over Supabase Realtime
- SMS parser auto-attaches Ethiopian bank payment references; Clean Architecture, offline-first with Hive, downloadable APK

Via Porta | Rust, Axum, Tokio | github.com/Biruk-gebru/via-porta

- Sustains 71k req/s at 1.8 ms p99 on a single machine, adding ~0.3 ms median latency over a direct backend call, measured with the full auth, routing and rate-limiting chain active
- Four load-balancing strategies, path/header/canary routing, circuit breaker, JWT auth, per-IP rate limiting, rustls TLS, Prometheus metrics, gossip health sync, and a live Ratatui TUI dashboard

EDUCATION

B.Sc. Computer Science | Addis Ababa University | 2022 - 2026 (Graduated)

Kifiya AI Mastery (KAIM) | 10 Academy | Jan - Apr 2026 | Certificate with Distinction

Certifications: Machine Learning Specialization | NLP with Classification and Vector Spaces | Neural Networks and Deep Learning (DeepLearning.AI / Coursera)