

BEREKET BIRHANU KINFU

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Machine learning engineer with 4+ years of experience spanning LLM evaluation, NLU research, and applied ML systems, plus a full-stack development background for shipping the tools around them. Also bring hands-on sales development experience, including cold calling, lead qualification, and CRM management in HubSpot. Built a Bayesian optimization framework that cut hyperparameter search time by 40+ GPU-hours/month, and quantized production models to 98% accuracy at sub-30ms latency on edge hardware. Currently red-teaming frontier language models' mathematical reasoning at Invisible Technologies. Comfortable working the full stack of an ML problem, from failure-mode analysis to model deployment.

Experience

Invisible Technologies

Advanced AI Data Trainer

Oct 2025 – Current

- Write adversarial math problems designed to break large language models' reasoning, probing multi-step arithmetic, word-problem logic, and edge-case calculations
- Analyze model outputs to identify recurring failure patterns, such as misapplied order of operations, unit-conversion errors, and faulty multi-step logic, and document them for the training pipeline
- Iterate on problem structure based on which formulations most reliably trigger incorrect reasoning, sharpening the signal used downstream for model fine-tuning
- Collaborate with a distributed team of AI trainers evaluating frontier models' mathematical reasoning ahead of release

MMCY

Sales Development Representative

Mar 2024 – Oct 2025

- Cold called prospective leads daily to generate qualified pipeline for the sales team
- Managed and tracked outreach activity in HubSpot CRM, keeping lead records, call notes, and follow-ups organized and current
- Qualified inbound and outbound leads against target criteria before handing off to Account Executives
- Refined call scripts and outreach approach based on what resonated with prospects, improving connect and conversion rates over time

iCOG-Labs

Machine Learning Engineer & Mathematical Researcher

Nov 2023 – Mar 2026

- Grid search was too slow to fit the team's GPU budget, so I built a Bayesian optimization framework for hyperparameter tuning instead, cutting search time and saving 40+ GPU-hours per month
- Worked on an OpenCog research initiative building reasoning engines in the Hyperon framework, applying Probabilistic Logic Networks (PLN) and graph theory to general-purpose machine reasoning
- Used information theory and Markov processes to improve NLU models for low-resource languages (Amharic, Tigrinya), where standard NLP tooling and training data were scarce
- Quantized models with TensorRT for edge deployment, holding accuracy at 98% while getting inference latency under 30ms

Projects

Strang — *React, FastAPI, Tailwind, OpenAI GPT-4o, HeyGen*

- Built a Chrome extension (Manifest V3) that converts highlighted text into AI-generated explainer videos via a FastAPI backend
- Integrated GPT-4o to expand text into structured screenplays and HeyGen's Video Agent to produce illustrative videos

Call-Pilot — *Flask, ElevenLabs API, ASR/TTS*

- Integrated ElevenLabs API for natural, adaptive voice synthesis in live conversational AI calls
- Built Flask backend services to orchestrate conversation flow, scheduling logic, and calendar integrations
- Implemented end-to-end voice recognition, TTS, ASR, and intent-extraction pipelines

DevSync — *Node.js, TypeScript, OpenAI GPT-4, CI/CD*

- Built an AI-powered schema synchronization platform detecting mismatches across 9+ ORMs (Prisma, Supabase, TypeORM, Kysely, Sequelize, Drizzle, Django, SQLAlchemy, Raw SQL)

- Integrated GPT-4 to generate AI-powered explanations of schema mismatches, risk assessments, and migration recommendations
- Shipped a production-ready CLI (Node.js/TypeScript) with automated scanning, migration execution, rollback, and GitHub Actions CI/CD integration

DermaAI — *Python, TensorFlow, Keras, OpenCV*

- Built a CNN-based model to classify skin type (normal, oily, dry, combination) from image data
- Developed image-processing pipelines (segmentation, color transformation, contrast adjustment) to detect skin conditions such as acne, rosacea, and hyperpigmentation
- Created a recommendation engine to suggest personalized skincare products based on individual skin profiles

Education

Addis Ababa Science and Technology University

Addis Ababa, Ethiopia

B.S. in Computer Engineering

- Relevant Coursework: Data Structures & Algorithms, Calculus I–III, Computer Architecture, DBMS, Digital Logic Design, Object-Oriented Programming, Statistics & Applications, Linear Algebra, Machine Learning, Artificial Intelligence

Skills

ML/AI: TensorFlow, Keras, OpenCV, TensorRT, Bayesian Optimization, NLU, LLM Evaluation & Red-Teaming, Prompt Engineering

Languages: Python, Java, JavaScript, TypeScript, Swift, SQL, PostgreSQL, HTML/CSS, MATLAB

Frameworks: React, React Native, Node.js, Flask, FastAPI, Spring Boot, Bootstrap

Tools & Platforms: Git, AWS, Docker, Jupyter, Google Colab, Kaggle, Supabase, PostgreSQL, HubSpot, VS Code, IntelliJ, PyCharm, Eclipse, Agile/Scrum

Activities & Certifications

- Teaching Assistant, Math 1014 (Calculus II/III) – AASTU College of Natural Science
- Certificate: Successful Negotiation: Essential Strategies & Skills – University of Michigan (Coursera)