Japheth Kiptoo Yegon

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Education

Northwestern University Evanston, IL

Bachelor of Science in Computer Science, Minor in Machine Learning and Data Science *Sept. 2023 – June 2027*

- **Relevant Courses:** Data Structures & Algorithms, Agile Software Development, Object-Oriented Programming, Computer Systems & Architecture, Machine Learning, Artificial Intelligence, Databases, Calculus, Statistics

Experience

Software Engineering Resident : AI/ML | *Headstarter AI* Oct. 2024 – Feb. 2025

- Build 14+ machine learning, AI-engineering and full-stack projects in fast-paced software team environments.
- Develop 5+ neural networks in Python, and scale 11 apps in Typescript on AWS with CI/CD pipelines.
- Implement llm-chaining, hyperparameter & fine tuning on 10+ LLM models controlling for latency & accuracy.
- Maintain 320+ peer-reviewed commits, achieving a career capital score of 120 through technical mentorship.

Software Engineering Intern | *Millennium Solutions East Africa Limited* July 2023 – Sept. 2023

- Built a dynamic web dashboard tool with Rails and React, centralizing reports for 54 employees with visual data.
- Optimized Airflow ETL pipeline to database integration, cutting company's automated email volume by 50%.
- Led code refactoring initiative expediting development by 30% through standardized design patterns.

Software Engineering Intern | *STEM Impact Center Kenya* Jan. 2023 – July 2023

- Optimized codebase efficiency by 30% through Docker containerization and automated server configurations
- Redesigned UI/UX with Figma mockups, increasing user engagement by 45% across 3rd party integrations.
- Implemented Splunk monitoring and API testing, reducing system downtime by 60% in distributed environment.

Projects

Discord Clone | *Next.js/React.js, Tailwind, TypeScript, Convex* Nov. 2024

- Engineered a full-stack Discord clone with real-time messaging and WebRTC video/audio streaming, achieving 95% feature parity with Discord; built responsive UI with React/Tailwind and implemented scalable backend using Convex for authentication, channel management, and file sharing with 100ms latency.

Bank Customer Churn Predictor | *Scikit-learn, XGBoost, Llama 3.1, Groq API* Oct. 2024

- Developed an end-to-end pipeline predicting bank customer churn on 10k-row dataset; engineered features with SMOTE for imbalanced data, trained ensemble of 5 ML models achieving 92% accuracy and 88% recall; integrated Llama 3.1 via Groq to generate personalized retention strategies and automate emails for high-risk customers.

RateMyProfessor : AI Chatbot Assistant | *Next.js/React.js, Pinecone, GPT-4, LangChain* Sept. 2024

- Implemented a web scraper that automatically extracts data from Rate my Professor and upsert to a Pinecone index; integrated a RAG pipeline using LangChain and GPT-4 for up-to-date, relevant answers to user queries.

BrainCards : AI Flashcard SaaS App | *Next.js/React.js, Llama 3.1, Stripe API, Firebase, Groq API* Aug. 2024

- Built and deployed a SaaS product that dynamically generates personalized flashcards using Llama 3.1 via Groq to enhance students' learning; integrated a paywall and custom pricing plans with Stripe API, yielding revenue.

TravelScheduler 201 | *C++, Google Maps API, CTA Bus Tracker API* Feb. 2024

- Parsed 100+ MB of Northwestern's OpenStreetMap data and visualized buildings/pathways using Google Maps API; integrated CTA Bus Tracker with user location to simulate real-time bus schedules within 60201 zipcode.

NuPython Interpreter | *Python, C, Google Test* Jan. 2024

- Created a Python interpreter in C, integrating Python syntax/semantics using Backus-Naur Form; optimized interpreter efficiency for complex scripts and refactored 50+ unit tests, increasing code coverage by 30%.

Leadership

CompAuton Project Team Lead | *Northwestern Robotics Club* Sept. 2023 – Present

- Led the design, manufacturing, and tuning of robot components for the 2024 Annual Robotics Competition.
- Implemented Dijkstra's Algorithm to optimize robot navigation time through complex maze structures.

Telecommunications Chair | *National Society of Black Engineers - Northwestern Chapter* Dec. 2023 – Present

- Maintain and update NSBE's website and Discord servers with current chapter information and career resources.
- Implemented a database-driven system for tracking member engagement, improving chapter analytics.

Technical Skills

Programming Languages: Python, Java, JavaScript, TypeScript, C/C++, C#, SQL, Ruby, MATLAB
Frameworks & Libraries: React.js, Next.js, Node.js, Rails, LangChain, pandas, NumPy, Scikit-learn, XGBoost
AI/ML & APIs : LLM APIs (Llama, Groq, Gemini, OpenAI), REST API, Stripe API
Development Tools & Databases: Git/GitHub, Jira, Figma, Firebase, Pinecone, PostgreSQL, Convex