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

- Collaborating in teams to build and deploy 14 projects across AI/ML and full-stack web apps, including custom neural networks, voice AI agents, generative UI components, multimodal RAG pipelines, and recommendation systems, while receiving mentorship and code reviews from industry-leading AI/ML engineers.

Software Engineering Fellow : AI | *Headstarter AI* July 2024 – Sept. 2024

- Built and deployed 5 AI projects in 5 weeks using Next.js/React.js, Firebase, Pinecone, OpenAI, Groq, and Stripe APIs, and Vercel, following agile methodologies with weekly sprints and CI/CD practices for iterative deployment.
- Scaled each web-app to 200+ users, iterated on user feedback to make continuous optimizations.

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.
- Reduced automated email volume sent to employees by 50% by modifying Airflow jobs to post data to a database.
- Refactored code to align with existing documentation for consistent design patterns and expedited development.

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

- Reduced codebase size by 30% and documented Docker/server configurations for easier maintenance.
- Aligned website UI with third-party vendor designs using CSS and Figma, improving user experience.
- Utilized Splunk and Postman to troubleshoot and resolve issues in a distributed system, enhancing its reliability.

Projects

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

- Developed an end-to-end pipeline for predicting bank customer churn on a 10k-row Kaggle dataset using feature engineering, SMOTE, and ensembling; trained 5 ML models to optimize accuracy and recall, and leveraged Llama 3.1 via Groq to improve predictions and automate incentivized retention emails for churn-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.
- Automated unit testing and firmware cross-compilation processes for C, C++, and Assembly code using CMake.

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, C/C++, C#, SQL, Ruby, MATLAB, HTML/CSS
Frameworks & Libraries: React.js, Next.js, Node.js, Rails, LangChain, pandas, NumPy, Scikit-learn, XGBoost
AI/ML & APIs : Llama API, Groq API, OpenAI API, REST API, Stripe API, Postman
Development Tools & Databases: Git, GitHub, Jira, Figma, Linux, Firebase, Pinecone, MySQL, PostgreSQL