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 Fellow | *Headstarter AI* July 2024 – Sept. 2024

- Built and deployed 5 AI projects in 5 weeks using React.js, Next.js, Firebase, Clerk, and Vercel, following agile methodologies with weekly sprints and incorporated 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 web dashboard tool with Rails and React, centralizing reports for 54 employees with visual data.
- Reduced automated email volume 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.

Computer Science Tutor | *Equity Bank Technological Hub* July 2023 – Aug. 2023

- Developed curriculum for intensive, week-long coding sessions with scholars presenting personalized projects.
- Conducted weekly 3-hour labs to help 50+ students apply OOP concepts and enhance object-oriented thinking.
- Monitored agile development cycles, including daily stand-ups, sprint planning, and sprint review.

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.
- Utilized Splunk and Postman to troubleshoot and resolve issues in a distributed system.

Projects

RateMyProfessor : AI Chatbot Assistant | *Next.js, React.js, Clerk, Pinecone, OpenAI, Miniconda* 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, Clerk, OpenAI, Stripe API, Firebase* Aug. 2024

- Built and deployed a SaaS product that generates dynamic flashcards based on any topic using the Llama 3.1 LLM via the Groq API; integrated a paywall and custom pricing plans using the Stripe API.

TravelScheduler 201 | *C++* Feb. 2024

- Parsed Northwestern's OpenStreetMap data and visualized buildings and pathways using Google Maps API; implemented efficient local file system storage and Git LFS for reliable handling of 100+ MB OSM data; simulated real-time bus transit schedules by integrating CTA Bus Tracker API with user location data.

NuPython Interpreter | *Python, C* Jan. 2024

- Created a Python interpreter in C, accurately integrating Python syntax/semantics using Backus-Naur Form; optimized codebase to enhance interpreter efficiency for complex Python script execution; developed and refactored 50+ unit tests using Google Test, increasing code coverage by 30%.

Leadership

CompAuton Project Team Lead | *Northwestern University 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

Languages: Python, Java, JavaScript, C/C++, C#, SQL, HTML/CSS, Ruby, Racket, MATLAB
Frameworks & Libraries: React.js, Next.js, Node.js, Rails, Flask, Django, pandas, NumPy
Developer Tools : Docker, Git, GitHub, Jira, Trello, Postman, Figma, Clerk, Linux
Technologies & Databases: REST APIs, Firebase, OpenAI, Pinecone, Stripe API, MySQL, PostgreSQL, SQLite3