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   *Sep. 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 – Present
- Build 5+ AI apps and APIs using Next.js, OpenAI, Pinecone, and StripeAPI with 98% accuracy and 1000+ users.
- Lead 4+ engineering fellows in developing projects from design to deployment using MVC design patterns.
- Coached by Amazon, Bloomberg, and Capital One engineers on Agile, CI/CD, Git, and microservices patterns.

Software Engineering Intern | *Millennium Solutions East Africa Limited*   July 2023 – Sep. 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 lean into 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

TravelScheduler 201 | *C++*   Feb. 2024 – Apr. 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 with CTA Bus Tracker API and user location data.

NuPython Interpreter | *Python, C*   Jan. 2024 – Mar. 2024
- Created a Python interpreter in C, accurately integrating Python syntax/semantics using Backus-Naur Form.
- Optimized codebase, enhancing interpreter efficiency for complex Python script execution.
- Wrote and refactored 50+ unit tests with Google Test, increasing code coverage by 30%.

WanderLust WayFinder | *HTML/CSS, React.js, Ruby*   July 2023 – Aug. 2023
- Collaborated to build a web application that helps tourists plan travel itineraries to Kenya's attraction sites.
- Incorporated secure authentication and authorization using JWT and BCrypt, ensuring user data protection.
- Developed database models and performed CRUD operations with PostgreSQL for efficient data management.

Hope Cancer Web App | *HTML/CSS, React.js, Rails*   June 2023 – July 2023
- Built pages and UI components with React and Tailwind, using REST APIs for server-client communication.
- Integrated Daraja API with Rails backend, enabling efficient donations and payments via M-PESA.
- Reduced page load time by 25% through performance optimization and caching techniques.

LEADERSHIP

CompAuton Project Team Lead | *Northwestern University Robotics Club*   Sep. 2023 – Present
- Designed, manufactured, and tuned robot components for the Annual Robotics Competition 2024.
- Implemented Dijkstra's Algorithm to minimize robot's navigation time through a maze.
- Automated unit test 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 NSBE's website and discord servers with chapter updates and career resources.
- Implemented a database-driven system for tracking member engagement and event attendance.

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, Matplotlib, Material UI
Developer Tools: Docker, Git, GitHub, Jira, Trello, Postman, Figma, VS Code, PyCharm, IntelliJ, Eclipse
Technologies: REST APIs, Firebase, OpenAI, Pinecone, Stripe API, Linux, MySQL, PostgreSQL, SQLite3