

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 2 engineering fellows in developing projects from design to deployment using MVC design 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 emails sent to employees 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 3-hour lab weekly to help 50+ students apply OOP concepts and develop 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 and 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 – April 2024

- Parsed Northwestern's OpenStreetMap data and visualized buildings and pathways using Google Maps API.
- Implemented local file system storage and Git Large File Storage for reliable handling of 100+ MB of OSM data.
- Simulated calls to CTA Bus Tracker API based on user location, retrieving real-time bus transit schedules.

NuPython Interpreter | Python, C

Jan. 2024 – Mar. 2024

- Created a Python interpreter in C, integrating Python syntax/semantics using Backus-Naur Form.
- Optimized codebase, enhancing interpreter efficiency for complex Python script execution.
- Wrote and refactored 50+ unit tests using Google Test, significantly increasing code coverage.

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.
- Developed database models and performed CRUD operations with PostgreSQL.

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 for donations and payments via M-PESA.
- Optimized website performance by reducing page load time and implementing 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 with chapter updates and career resources.
- Implemented a database-driven system for tracking member engagement and event attendance.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, C#, SQL, JavaScript, HTML/CSS, Ruby, Racket, MATLAB

Frameworks/Libraries: React.js, Node.js, Rails, Flask, Django, pandas, NumPy, Matplotlib, Bootstrap, Tailwind

Developer Tools: Docker, Git, GitHub, Jira, Trello, Postman, Figma, VS Code, PyCharm, IntelliJ, Eclipse

Technologies: REST APIs, Linux, MySQL, PostgreSQL, SQLite3, Airflow, Splunk, Google Test, Google Cloud Platform