Kiplimo Kemei

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Education

University of Wisconsin-Madison — Madison, WI

Bachelor of Science in Electrical Engineering and Computer Science — December 2026

- Enrolled in the L&S Honors Program

Experience

Chemistry Electronic Shop — February - June 2024

Technician — Madison, WI

- Designed and assembled 3 separate custom PCBs (sensors, actuation) for departments within UW-Madison.
- Performed schematic capture, electrical verification and board layout with KiCad software.
- Developed software using Python in the Arduino IDE to establish communication between components.
- Rigorously tested code to ensure that data was within ±1% of expected results when performing a live demo.

Flora Ola Limited — June 2022 – August 2023

Software & Data Engineer Intern — Nairobi, Kenya

- Developed a React-based web application to streamline data management for greenhouse operations, enabling real-time data transmission to the cloud, resulting in a 30% increase in productivity by improving the efficiency and accuracy of environmental data monitoring and handling.

Projects

16-Bit Processor | *Verilog* — June-August 2024

- Designed and implemented a Turing-complete, 18-instruction stored-program computer, focusing on RTL design and modular testing, achieving 95% test coverage and successfully executing complex algorithms.
- Simulated and optimized critical hardware components including Memory and Register File, reducing latency by 20% and improving overall processor performance

Network Security Intrusion Detection | *Java* — May-June 2024

- Designed and implemented a clustering algorithm using Kruskal's MST, enabling efficient anomaly detection in datasets of up to 1 million entries, with a 40% reduction in processing time compared to baseline methods.
- Engineered a hybrid network traffic classification model, integrating Random Forest and clustering techniques, resulting in a 30% reduction in false positives compared to single-algorithm approaches.

Quick Image Recognition | *Python, Tensorflow* — June 2024

- Engineered a CNN model using TensorFlow, training on 150,000 diverse images and attaining 95% accuracy in classifying 100 everyday object types.
- Implemented real-time video processing using OpenCV, achieving 30 FPS with 85% classification accuracy, enabling smooth object detection and classification in live video streams

Leadership Activities

ColorStack — January 2024 – Present

Executive Board Member — Madison, WI

- Spearheaded 3 initiatives to increase Black and Latinx CS membership, resulting in a 20% growth in community engagement and a 25% improvement in members' reported career readiness.
- Organized workshops and social gatherings, specifically designed to enhance the professional and academic experiences of Black and Latinx CS undergraduate students at UW-Madison.

Skills

Languages: Java, Python, HTML/CSS, PHP, R, JavaScript, React, Verilog
Developer Tools: PowerShell, Bash, Git, Docker, MySQL, Maven, WordPress, Google Cloud Platform, Tensorflow
Applications: Kibana, DynamoDB, PowerBI, Excel, Access, PyCharm, WebStorm
Miscellaneous: Linux/Unix Networks, Apache/Nginx, Meta Front-End Engineering Coursera Certificate