

Elias Chikwanda

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EDUCATION

Stanford University

BS Electrical Engineering and Computer Science

Stanford, CA

Expected June 2027

Coursework: Parallel Computing, Machine Learning, Operating Systems, Computer Architecture, OOP, Embedded Systems, Computer Systems, Algorithms & Data Structures, Digital Systems Design, Signals and Systems, Linear Algebra

WORK EXPERIENCE

Stanford CURIS Fellow

Stanford, CA

System Development Intern

Jun 2025 – Aug 2025

- Developed and rigorously tested the I2C driver module for the Mango Pi (RISC-V), enabling seamless peripheral integration for 40+ Stanford students each academic quarter with 90% reliability
- Engineered a student-friendly I2C driver API with modular abstraction and comprehensive documentation, reducing student onboarding time by 60% and significantly decreasing setup complexity for course final projects
- Collaborated on cross-functional collaboration with CS107e faculty to revamp the syllabus for RISC-V transition

Stanford Learning Technologies & Spaces

Stanford, CA

Student Technical Support Specialist

Apr 2024 - Present

- Resolved 250+ technical issues including Wi-Fi connectivity, OS reinstallation, device encryption, and network troubleshooting, maintaining 95%+ student satisfaction while ensuring seamless access to campus technology services
- Maintained and updated technical documentation in Confluence for emerging technologies and new campus network infrastructure, creating knowledge base resources that reduced resolution time by 30% for common issues
- Developed expertise in customer service by translating technical concepts into accessible solutions to Stanford students

Econet Wireless

Harare, ZW

Software Engineering Intern

Jun 2024 – Aug 2024

- Automated end-to-end UI/UX testing pipelines using Selenium, Cypress, and TestNG, reducing regression testing time by 80% and accelerating release cycles across 5 production systems.
- Developed robust API test suites and reporting tools, improving backend service reliability and test coverage, with enhanced logging and reporting for QA insights.
- Engineered scalable backend API endpoints for ecochat, enhancing microservice communication across internal platforms.

PROJECT EXPERIENCE

PiiLearn | Web Dev Project | *Spring Boot, Angular, PrimeNG, PostgreSQL, JWT, OpenAPI, Docker*

[GitHub Repo](#)

- Developed a secure, responsive full-stack web application using Spring Boot and Angular, enabling 500 students to attempt 175+ Cambridge multiple choice past papers online, with automated grading and progress tracking, resulting in an 30% improvement in exam preparation efficiency

Grow Your Own Mango | Systems Project | *C, Assembly, Mango Pi, SPI, UART*

Code available on request

- Engineered 12 core system modules including gpio.c, timer.c, and malloc.c, enabling precise control of Pi's peripherals and optimizing memory management, resulting in improved system performance
- Designed and Implemented a weather station and automated drip irrigation system using implemented modules, integrating a BME280 sensor for temperature, humidity, and pressure, and tracking soil moisture for real-time watering control.

CarbonInsight | Stanford TreeHacks Hackathon Project | *Reflex (Python), NumPy, SciPy*

[DevPost](#) | [GitHub Repo](#)

- Developed an interactive dashboard using Reflex and CSS, visualizing carbon offset supply and demand predictions, resulting in improved user understanding of decarbonization strategies
- Modeled multi-year equilibrium of carbon markets using Numpy, and SciPy, enabling company-specific net-zero pathways

TECHNICAL SKILLS

Languages: C/C++, Java, Python, TypeScript, Verilog, JavaScript, SQL, Assembly (MIPS, RISC-V), HTML, CSS

Frameworks: Spring Boot, Django, Angular, React.js, Node.js, Next.js, Selenium, Cypress

Databases/Protocols/Tools: PostgreSQL, MySQL, I2C, SPI, UART, Git, AWS, Linux, Docker, GitActions

DataScience/Machine Learning: Scikit-Learn, Keras, Tensorflow, NumPy, SciPy, Pandas, Matplotlib

ACTIVITIES & AWARDS

Awards: 1st Place Treehacks (Stanford Hackathon - Sustainability Track), Exceptional Achievement Award (Academic)

Leadership/Activities: Senior Program Coordinator (Stanford Student Learning Support), Computer Security Research Assistant, ColorStack Community, CodePath