

Elias Chikwanda

eliaschi@stanford.edu | [linkedin.com/in/eliaschikwanda/](https://www.linkedin.com/in/eliaschikwanda/) | eliaschikwanda.github.io

EDUCATION

Stanford University

June 2028

BS Electrical Engineering and Computer Science

Relevant Coursework: Machine Learning, Mining Massive Data Sets (Big Data, Recommender Systems), Data Structures & Algorithms, Operating Systems, Computer Networking (TCP/IP), Computer Architecture, Parallel Computing, Embedded Systems

WORK EXPERIENCE

Uber

Sunnyvale, CA

Software Engineering Intern - Core Services Engineering

Jun 2026 – Sep 2026

Stanford University

Stanford, CA

System Development Intern

Jun 2025 – Aug 2025

- Developed, tested, and documented a modular I2C driver module and a student-friendly API for the Mango Pi (RISC-V), enabling peripheral integration for 40+ Stanford students each academic quarter, achieving 90% reliability.
- Implemented and optimized the SD card MMC protocol for the Mango Pi (RISC-V), including `mmc_bwrite` and `mmc_bread` functions and FATFS filesystem integration, enabling stable high-speed storage for 40+ students' course projects.
- Partnered with CS107e faculty to revamp the course syllabus for RISC-V transition.

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 and built a custom error code handler, enabling meaningful error messages that reduced debugging time by 40%.

PROJECT EXPERIENCE

PiiLearn | Full-Stack Web Development Project | piilearn.com

Mar 2025 - Present

- Developed a secure, responsive full-stack platform for 820+ students, architecting 40+ documented REST APIs with an average 104ms response time via optimized PostgreSQL queries and efficient Spring Boot design.
- Boosted exam preparation efficiency by 30% through an automated grading system, real-time progress analytics, and an intuitive Angular/PrimeNG interface for Cambridge past paper practice.
- Led migration from Django to Spring Boot, implementing JWT authentication, Docker containerization, and CI/CD pipelines with zero downtime for the active user base.

Grow Your Own Mango | Systems Project | C, Assembly, Mango Pi, SPI, UART, I2C

Jan 2024 - Mar 2024

- 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 (1st Place - Sustainability Track) | [DevPost](#) | [GitHub Repo](#)

Feb 2024

- Collaborated cross-functionally to develop an award-winning predictive analytics platform optimizing corporate net-zero strategies, coordinating modeling, UI, and financial analysis across Scope 1–3 emissions.
- Built a stakeholder-focused dashboard with Reflex, enabling companies to visualize year-over-year carbon market equilibrium and tailor decarbonization pathways based on industry-specific marginal abatement costs.

SKILLS & LEADERSHIP

Programming Languages: Python (*NumPy, Pandas, PyTorch, Scikit-Learn*), C/C++, SQL, Java, Verilog, RISC-V

Web Development: Spring Boot, Django, Angular, PrimeNG, HTML, CSS, Reflex, Cypress, Selenium

Databases/Tools: PostgreSQL, MySQL, Hadoop/Spark, Git, Docker, AWS, Linux, Open API, Linux

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