

Njeri Gachoka

Los Angeles, CA

(310)435-2187 | njerigachoka@gmail.com | njerig.me

EDUCATION

University of California, Santa Cruz

B.S. in Computer Science, Minor in Computer Engineering expected Jun. 2026

Santa Cruz, CA

Sept. 2024 - Present

Santa Monica College

A.S. in Computer Science, A.D.T. in Mathematics, A.A. in General Science

Santa Monica, CA

Jun. 2021 - Jun. 2024

RELEVANT EXPERIENCE

Robotics Research Intern

Fluid Interfaces @ MIT Media Lab

Jun. 2025 - Present

Cambridge, MA

- Replaced unreliable legacy software for a humanoid by architecting a new Python control system from the ground up, delivering a stable and modular platform that unblocked the lab's human-robot empathy research.
- Engineered a conversational pipeline with ≤ 250 ms latency using OpenAI's APIs, synchronizing speech with 17 facial servos in real-time to create lifelike interactions for the empathy study.
- Developed an aiohttp web app with an intuitive UI for remote control and monitoring, streamlining the lab's research workflow.

Telemetry Co-Lead

Formula Slug

Mar. 2025 - Present

Santa Cruz, CA

- Developed a real-time telemetry dashboard with an STM32 microcontroller and LCD display, providing drivers with critical vehicle data to optimize race performance.
- Led a team of 26 engineers across 5 core software projects, contributing to the team's historic achievement of ranking 18th overall in competition for the first time.

Autonomous Vehicle Engineer and Researcher

AIEA Lab & Cruz Control

Sep. 2024 - Present

Santa Cruz, CA

- Engineering a 1/10th-scale autonomous vehicle testbed to validate a novel Spiking Neural Network (SNN) for bridging the sim-to-real gap in autonomous control.
- Training and evaluating SNNs on fused event camera, LIDAR, and IMU data to pioneer robust, low-power autonomous navigation.

Summer Undergraduate Research Experience Intern

Amazon & University of California, Los Angeles

Jun. 2024 - Aug. 2024

Los Angeles, CA

- Designed and built a teleoperated robotic autograph system under Dr. Veronica J. Santos at UCLA's Biomechatronics Lab
- Implemented a resolved-rate motion control system (using ROS and Python Robotics Toolbox) which translated digital input into precise robotic movements
- Designed and built a custom haptic feedback system with a sensorized end-effector for enhanced writing control

TECHNICAL SKILLS

Languages: Python, C, C++, Bash, Clojure / ClojureScript, HTML, CSS, JavaScript, TypeScript, Assembly, MATLAB

Frameworks & Libraries: ROS, React.js, Next.js, Flask, OpenCV, NumPy, Robotics Toolbox

Developer & Design Tools: Git, GitHub, Docker, digital logic design, circuit design, KiCad, Onshape, Figma

SELECTED PROJECTS

Haystack | Jetson Orin Nano, Python, OpenCV, Swift

Oct. 2024 - Present

- Developed a computer vision pipeline using Python and OpenCV on a Jetson Orin Nano to identify and track specific clothing items in a cluttered environment.

Pico (forcorsairs) | HTML, CSS, JavaScript, TypeScript, PostgreSQL, GCP

Jun. 2023 - Jun. 2024

- Architected a full-stack academic platform and browser extension using React, Next.js, and PostgreSQL to parse and deliver structured course data for Santa Monica College.