

Cong Hoang "Bill" Le

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EDUCATION

Franklin W. Olin College of Engineering

Needham, MA

B.S. Engineering: Robotics (expected May 2027)

GPA: 3.91

Relevant Coursework: Modern Robotics (Northwestern Online), Computational Robotics, Signals & Systems, Controls, Linear Algebra, Multivariable Calculus, Data Science, Discrete Mathematics

WORK EXPERIENCE

Manufacturing Test Engineer Intern

May 2026 — Aug 2026

Amazon Lab126

- Supported Amazon Leo program: implemented test procedures, set up test stations for line bring-up, and production debugging across cross-functional teams.
- Scoped and developed internal tool infrastructure using CloudFormation IaC (Lambda, Cognito, DocumentDB, S3, API Gateway) with CI/CD in a team of two.

Founding Full-Stack Engineer

Jan 2026 — Jun 2026

AfroCred

- Architected rental property platform from 0 to MVP as sole engineer: Django REST/PostgreSQL backend with Twilio OTP, Didit KYC, Dropbox Sign e-signature, MTN/Airtel mobile money webhooks, and credit scoring.
- Built mobile-first React/TypeScript tenant SPA wrapped as native Android app (Capacitor).

TECHNICAL EXPERIENCE

Weed Identification Team

Jan 2024 — Dec 2024

Olin Farm Robotics

1st Place, 2024 Farm Robotics Challenge

- Implemented plant/weed segmentation using DBSCAN clustering with bounding box detection; compressed image point-cloud matrices via dimensionality reduction, decreasing latency from 0.3s to 0.05s per frame (6x speedup).

Device Interaction Lead

Aug 2025 — May 2026

Olin Assistive Technology Lab

- Led 10-person interdisciplinary team conducting 50 interviews with blind/low-vision individuals; synthesized findings into actionable design insights.

Course Assistant

Aug 2024 — May 2025

Multivariable Calc, Linear Algebra, Discrete Math

- Facilitated weekly office hours and graded assignments for 60+ students across three core mathematics courses.

SOLO PROJECTS

LLM-driven Robotic Arm github.com/titut/CYPIU

Jun 2025 — Aug 2025

- Integrated OpenCV/YOLOv4 for object detection and AprilTags for 5-DOF pose estimation; implemented inverse kinematics, Jacobian-based control, damped least-squares IK, and line search optimization.
- Built end-to-end system from CLI TUI to LLM tool usage for planning and picking household objects.

Zenoh Robotics Stack github.com/titut/CYR

Feb 2026 — Present

- Replaced ROS 2 with custom Zenoh pub/sub stack (8 decoupled nodes: perception, localization, planning, control, safety) to eliminate framework overhead; implemented DROP congestion control, latest-wins ring buffers, typed versioned wire schema.
- Developing hardware-agnostic stack: YAML-configured HAL driver abstraction with unmodified localization (MCL + Gauss-Newton ICP) and planning (footprint-aware A*).

Automation Forge github.com/titut/automation-forge

May 2026 — Present

- Designed automated LLM-agent tuning pipeline replacing ad-hoc prompt iteration: test harness, failure-taxonomy evaluator, permission-gated editor with token/time/cost budgets and versioned rollback.

LEADERSHIP

Director of Volunteering

Aug 2024 — May 2025

Student Government

- Managed \$8,500 budget to plan and execute 20 volunteering events; raised \$20,000 for community initiatives.

SKILLS

Languages: C, Python, TypeScript | Frameworks: Django REST, React, ROS 2 | Tools: AWS (Lambda, DocumentDB, S3, API Gateway, CloudFormation), PostgreSQL, Redis, Git, Gazebo, Linux