Cong Hoang "Bill" Le

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choangbill.le@gmail.com | github.com/titut | Australian PR | US: F-1, OPT/STEM-OPT eligible

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 (6× 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