

Tuan Nguyen

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EDUCATION

VNU University of Engineering and Technology

Bachelor of Engineering, Robotics Engineering

Aug 2024 – May 2029

Hanoi, Vietnam

EXPERIENCE

Software Engineer

WCManage

Jul 2026 – present

Platform for ward-level public services with integrated Zalo Mini Apps for residents.

- Built modular Rust backend: split public and admin APIs around a shared core domain.
- Built resident-facing Zalo Mini Apps: media feedback submission, news feeds, and group management.
- Shipped infrastructure with Docker Compose, Caddy, and PostgreSQL.

Rust, TypeScript, Next.js, PostgreSQL, Docker, Caddy

Undergraduate Research Assistant

UET RE AMR (VNU-UET)

Jul 2026 – present

Autonomous mobile robot platform built on ROS2 Humble.

- Implemented UART communication protocol bridging MCU firmware and onboard compute.
- Configured and tuned SLAM Toolbox and Nav2 for autonomous navigation.
- Currently working on telemetry streaming to a central server and on-device VLM integration.

ROS2, Embedded, SLAM, Nav2, C++, Python

PROJECTS

Ball Balancer (github.com/justmangoou/ball-balancer)

Jan 2026 – May 2026

Self-balancing platform that holds a ball in place using PID control. RBE2022 course project.

- Built custom STM32F4 firmware, replacing the reference Teensy code.
- Configured hardware timer PWM for stepper control and tuned the PID loop to balance the ball.

STM32, C, PID

SKILLS

- Programming:** Rust, C/C++, Java, Python, TypeScript
- Robotics:** ROS2, Nav2, SLAM, STM32
- Backend and ops:** PostgreSQL, Docker, Caddy, Linux
- Languages:** Vietnamese (native), English (fluent), Japanese (basic)