

# NADULA GARDIYEHEWA

Cary, NC · [ng3922@princeton.edu](mailto:ng3922@princeton.edu) · (—) ——— · [linkedin.com/in/nadulag/](https://www.linkedin.com/in/nadulag/)

## EDUCATION

### Princeton University

B.S.E. in Computer Science, Minor in Robotics

Princeton, NJ

Aug 2024 - May 2028

*Relevant Coursework:* Data Structures & Algorithms, Introduction to Programming Systems, Computer Architecture and Organization, Introduction to Machine Learning, Advanced Programming Techniques

## EXPERIENCE

### Princeton Racing Electric

*Low Voltage Lead (prev. Embedded Systems Lead)*

Princeton, NJ

Sep 2024 - Present

- Develop firmware in C++ for microcontrollers interfacing with automotive sensors and peripherals (ADC, SPI, I<sup>2</sup>C, CAN/TWAI), enabling reliable acquisition and processing of critical signals including pedal inputs, battery data, and vehicle state information.
- Designed and implemented embedded software for vehicle telemetry and control systems using ESP32 and NVIDIA Jetson Orin Nano, integrating distributed sensor data over CAN bus for real-time vehicle monitoring and driver feedback.
- Architected and debugged CAN-based communication networks, defining message IDs, data packing schemes, and communication protocols to ensure deterministic data exchange between ECUs.
- Collaborated with electrical and mechanical subteams to integrate embedded systems into high-voltage vehicle architecture, supporting high-voltage battery monitoring, system bring-up, and hardware validation during testing cycles.

### Kenotom

*Automotive R&D Engineering Intern*

Thessaloniki, Greece

Jun 2026 - Aug 2026

- Developed embedded software for automotive ECUs using C, ETAS RTA-CAR (AUTOSAR Classic), and Infineon AURIX TC387 evaluation boards.
- Configured and generated AUTOSAR software components, including BSW, RTE, OS, and MCAL, resolving software integration and build issues across the embedded stack.
- Collaborated with a Greece-based team in a multilingual engineering environment, adapting to international development practices while contributing to software integration and validation.

### InstantReplay

*Software Engineering Intern*

Princeton, NJ

Jun 2025 - Dec 2025

- Developed cross-platform marketplace features using React.js (web) and Flutter (mobile), implementing responsive UI components, state management, and API integrations for consumer purchasing and brand dashboards.
- Architected backend services following an MVC architecture, designing RESTful APIs to support authentication, inventory management, order workflows, and analytics pipelines.
- Integrated Stripe API for secure payment processing, implementing checkout flows, transaction handling, and webhook-based backend event synchronization.
- Implemented fulfillment workflows using Shippo, automating shipping label generation and tracking.
- Built user engagement systems including push notifications and behavioral analytics with PostHog, enabling event tracking, funnel analysis, and data-driven product iteration.

### NCSSM

*Computer Science Teaching Assistant*

Morganton, NC

Aug 2023 - May 2024

- Supported 300+ students in Java and Python through structured debugging assistance and concept instruction at on-campus help desk.
- Developed and maintained a Flutter mobile application for Fabrication Lab usage tracking and resource management.

## SKILLS

|                         |                                                                          |
|-------------------------|--------------------------------------------------------------------------|
| Languages:              | C, C++, Python, Dart, JavaScript, Java, SQL                              |
| Embedded & Systems:     | ESP32, NVIDIA Jetson, CAN Bus (TWAI), SPI, I <sup>2</sup> C, UART/Serial |
| Full-Stack & Mobile:    | Svelte, React.js, Flutter, Rest APIs, PostgreSQL                         |
| Tools & Infrastructure: | Git, GitHub Actions (CI/CD), Agile Development, Linux, API Integration   |