

Andrei Gerashchenko

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EDUCATION

DARTMOUTH COLLEGE, Thayer School of Engineering	Hanover, NH
Master of Engineering — Computer Engineering	June 2025
Bachelor of Engineering — Computer Engineering	June 2024
WHEATON COLLEGE	Norton, MA
Bachelor of Arts — Computer Science	May 2023

TECHNICAL AND ENGINEERING EXPERIENCE

Electrical & Embedded Firmware Engineer – Enyuare, Lexington, MA July 2025 – Present

Own and execute full lifecycle development of complex embedded platforms for client systems, including architecture, RTOS firmware, production-ready hardware, and regulatory compliance, with designs optimized for high reliability and 10+ year product lifetimes.

- Develop RTOS-based embedded firmware, including low-level drivers, task scheduling, power management, diagnostics, and full hardware bring-up across multiple platforms.
- Architect production-ready embedded hardware with high-speed digital and mixed-signal circuitry, RF components, and designs optimized for mass production and long-term reliability.
- Deliver embedded systems meeting FCC and intrinsic safety requirements, with full end-to-end responsibility from prototype to production-ready design.

Research Program Intern – MIT Lincoln Laboratory, Lexington, MA June 2024 – Sep 2024

Developed a standardized methodology to quantify microgrid stability and optimizing EV charging configurations.

- Integrated electric vehicle charging equipment with HIL-based microgrid models for accurate grid simulation.
- Developed communication bus reverse-engineering tools to enable integration of new hardware.
- Created high-fidelity simulation of a microgrid installation site with added electric vehicle infrastructure.

Embedded Engineering Intern – Plexim Inc, Cambridge, MA June 2022 – Aug 2022

Implemented support for TI Fast Serial Interface (FSI) module in PLECS C2000 Target Support Package.

- Developed automated configuration workflows for networks of C2000 devices with minimal user input.
- Designed front-end interface for module as part of C2000 target support package.
- Implemented automatic C code generation for FSI modules in PLECS, enabling PWM synchronization across multiple devices.

RELEVANT PROJECTS

2025 Full Vehicle Electrical & Firmware Design – Dartmouth Formula Racing Fall 2024 – Spring 2025

Led electrical and firmware design for the 2025 vehicle, including low-voltage system, firmware, driver interface, and architecture decisions for high- and low-voltage systems.

- Designed and implemented the complete low-voltage system, ensuring reliability, safety, and seamless integration with high-voltage components.
- Developed all vehicle firmware, including communications, energy management, data acquisition, and driver assistance algorithms.

Pedestrian/Cyclist Traffic Counting – Dartmouth College Spring 2023 – Winter 2024

Sponsored by the Town of Hanover to design and build an automated pedestrian and cyclist traffic counting device.

- Designed and manufactured 3 iterations of an IoT recording device, optimizing for high reliability, long-term outdoor operation in harsh weather, and minimal maintenance.
- Developed web app for remote control of the recording device, ensuring ease of use for municipal staff.

LEADERSHIP AND MANAGEMENT EXPERIENCE

Captain – Dartmouth Formula Racing, Hanover, NH Dec 2021 – June 2025

Led design and implementation of electrical systems across multiple generations of race vehicles.

- Engaged in overall team leadership discussions and participated in cross-team meetings to coordinate overall vehicle development decisions.
- Established and enforced rigorous testing and validation protocols to ensure rule compliance and driver safety.

TECHNICAL SKILLS

Languages & HDLs: C, Python, C++, VHDL, MATLAB, Lua

Tools: KiCad, Altium Designer, Xilinx Vivado, Visual Studio, SOLIDWORKS