Ronak Jain

617-840-1096 | ronak@ronakpjain.com | github.com/ironic1234 | linkedin.com/in/ronakpjain

Education

Purdue University
Electrical Engineering — *West Lafayette, IN*
Relevant Coursework: *Advanced C Programming, Introduction to Electrical Engineering + Lab I and II), Python for Data Science, Linear Algebra, Multivariate Calculus, Ordinary Differential Equations*

Technical Skills

Languages: Python, C++/C, CUDA, Java, Lua, Rust
Developer Tools: Git, Docker, AWS, **NeoVim**
Manufacturing: PCB design (EasyEDA, Altium), 3D Printing/CAD (Solidworks, Fusion 360), Laser Cutting

Projects

Purdue Robomasters August 2024 – Present
- Develop firmware for STM32 microcontrollers using embedded C to control robotic systems.
- Design and implement control algorithms for omni-wheel and swerve-drive robots, enhancing maneuverability.
- Automate build processes and command generation with scripting to improve development efficiency.
- Design PCBs for motor control, integrating electrical and embedded systems for high-performance robotics.

Purdue Electric Racing September 2024 – Present
- Design and manufacture PCBs for vehicle testing, optimizing power distribution and sensor integration.
- Port an existing task scheduler to FreeRTOS, improving real-time performance and system reliability.
- Develop a hardware abstraction layer for a high-speed external oscillator to improve timing accuracy and system stability.

Mofi May 2025 – Present
- Developed a Spotlight-inspired macOS application launcher using Tauri, Rust, and Svelte for quick keyboard-driven app launching
- Implemented fuzzy search, keyboard navigation, and efficient UI rendering to enhance user experience and productivity
- Integrated Rust backend logic for dynamic discovery and launching of applications from standard macOS directories

Ronfire May 2025 – Present
- Engineered a minimal HTTP server in Rust utilizing Tokio for asynchronous event-driven request handling and response generation
- Implemented Unix socket listening with concurrent request handling to optimize server performance and resource utilization
- Created a robust request parsing system and error handling to deliver efficient static file serving and clear HTTP responses

Dots September 2024 – Present
- Built a highly customized MacOS setup enhancing developer productivity with integrated debugging (DAPs), comprehensive language server support (LSPs), and streamlined workflows

Experience

Mentor December 2022 – August 2024
Einstein's Workshop — *Burlington, MA*
- Instructed and mentored students in computer science and engineering subjects, including programming and CAD, fostering hands-on learning and creativity
- Organized summer camps with over 20 students each week, delivering sessions on Minecraft Modding and 3D Printing, cultivating critical thinking and technical skills in an engaging environment
- Coordinated and managed up to 3 birthday parties per weekend, overseeing projects, event logistics, and ensuring a fun and welcoming environment for attendees