

Patrick Rubinas

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EDUCATION

University of New Hampshire

B.S. Computer Science, 3.66 GPA

Anticipated Graduation May 2025

Durham, NH

EXPERIENCE

Interoperability Lab

IOL Technician

June 2022 – Present

Durham, NH

- Collaborated with a team to test the IPv6 interoperability and capabilities of various devices.
- Developed device drivers using Expect to increase the efficiency of testing via automation.
- Maintained a high standard of testing and organization to support the standards defined in ISO/IEC 17025.
- Corresponded with vendors to troubleshoot device issues and maintain effective relationships.

Arista Networks

Software Engineer Intern

May 2024 – Aug. 2024

Nashua, NH

- Developed profiles for Storm Control to centralize the configuration of broadcast, multicast, and unicast thresholds, allowing for easy application of pre-configured settings across multiple interfaces.
- Implemented new CLI commands and modes using Python to support the configuration and management of Storm Control profiles, simplifying the application of Storm Control configurations across interfaces.
- Utilized Arista's Continuous Integration testing framework to develop and implement unit tests for the new Cli commands, ensuring functionality and reliability of the Storm Control profiles.

University of New Hampshire Center For Academic Resources

Academic Mentor

April 2022 – Nov 2022

Durham, NH

- Coached students on their academic and organizational skills to meet their individual academic goals.
- Collaborated with coworkers to further develop new ways to meet effectively with students.

PROJECTS

Linux Memory Allocator Library in C | *C, Linux, Git*

- Developed a custom memory allocation library in C, implementing *malloc* and *free* functionalities without using standard allocation functions.
- Designed and implemented a dynamic heap initialization function using Linux's *mmap* system call to support applications with varying memory requirements.
- Integrated advanced free-space management and fragmentation reduction techniques, including coalescing adjacent free blocks to minimize memory waste and improve the efficiency of allocation and deallocation operations.
- Performed comprehensive performance testing and validation via simulation real-world usage to validate proper memory handling under various scenarios.

Calorie Counter WebApp | *Python, MongoDB, PyMongo, Azure, CSS, Git*

- Developed a Calorie Counter WebApp that allows users to track their daily calories and macro-nutrient goals.
- Used MongoDB to store user entries and PyMongo to allow Python to interact with user database.
- Utilized Azure to facilitate communication between application and database.
- Implemented CSS to provide a user-approachable web application that highlights user's goals.

TECHNICAL SKILLS

Languages: C, Python, Java, C++, Expect, Tcl

Frameworks/Libraries: JUnit, MongoDB, JavaFX

Developer Tools: Git, VS Code, PyCharm, IntelliJ, Eclipse, SceneBuilder, Linux

EXTRACURRICULAR ACTIVITIES

University of New Hampshire Rowing Club

Club Member

August 2022 – May 2023

Durham, NH

- Competed as a member of an eight-person boat in regattas against other New England colleges.