# Aidan O'Neill

603-498-0944 | aidanenzooneill@gmail.com | linkedin.com/in/aidan-o-neill | github.com/oneillgq

## Education

**Boston College** Chestnut Hill, MA
*BA in Computer Science, BSc in Management: Concentration in Information Systems* *Aug 2021 – May 2025*
**GPA:** 4.0/4.0 – Summa Cum Laude – Recipient of the Rev. Thomas I. Gasson, S.J. Award
**Relevant Coursework** *Operating Systems, Natural Language Processing, Computer Networks, Algorithms*

## Experience

**Undergraduate Research Assistant** Jan 2024 – Aug 2024
*Boston College* *Chestnut Hill, MA*
- Contributed to all stages of research on the diffusion of technical tools in the U.S. economy, focusing on data management and analysis using Bass modeling for comparison.
- Refactored a shared R codebase, ensuring efficient and reproducible data processing, including scraping Wikipedia and working with large-scale datasets.
- Created visual diagrams for analysis, supported the literature review, and applied advanced R skills while learning new libraries (tidyverse, rvest, httr2, DIMORA).

**Computer Science Society Treasurer** Sep 2023 – May 2025
*Boston College* *Chestnut Hill, MA*
- Structured club's semester budgets, liaised with collegiate administration, and oversaw purchase approvals.
- Led fundraising initiatives and managed the budget for a hackathon, securing both school backing and outside sponsorship.

**Undergraduate Teaching Assistant** Jan 2023 – May 2025
*Boston College* *Chestnut Hill, MA*
- Teaching Assistant for Financial Accounting, Python Programming, and Data Analytics & Applications in R, providing assistance with course material and technical support.
- Led weekly discussions explaining key Python libraries and functions and debugged student code.
- Taught data object concepts, data cleaning principles, and API/web scraping strategies in R, while grading and providing feedback on assignments.

## Projects

**xv6 Development: System Calls, Backtracing, & Scheduler** | *C, Vim* Jan 2025 – Mar 2025
- Implemented multiple system calls (sleep, procinfo, trace, sysinfo) in the xv6 operating system.
- Integrated a multi-level feedback queue scheduler to optimize process prioritization and CPU utilization.
- Ensured memory safety, stable performance, and efficient resource usage while developing kernel and process space backtracing to improve system diagnostics.

**Personal Tutor** | *CircuitPython, FeatherWingV2, FeatherS2, I2C Gamepad* Nov 2024 – Dec 2024
- Designed and developed a physical device for searching, displaying, and editing Magic: The Gathering cards, integrating a microcontroller, display board, and gamepad.
- Coded on-screen keyboard user-interface, loading bars, API queries, and image processing algorithms.
- Optimized memory usage in Python and incorporated a rechargeable lithium-ion battery for portability.
- Featured on DIY project website Instructables, receiving hundreds of views.

**Full Stack HTTP & DNS Servers** | *Java, VirtualBox* Oct 2024 – Dec 2024
- Built an HTTP server with multithreading, error checking, and dynamic file response handling.
- Developed DNS server capable of parsing zone files and handling or redirecting queries for iterative resolution.
- Implemented DNS response caching with TTL for enhanced performance and reduced latency.

## Technical Skills

**Languages**: C, Python, Rust, Java, R, JavaScript
**Frameworks**: CircuitPython, React
**Developer Tools**: Git, Vim, Oracle VirtualBox, VS Code, PyCharm, IntelliJ
**Libraries**: java.net, pandas, numpy, matplotlib