

# Ciaran F. Heaney

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## EDUCATION

**University of Notre Dame** | Notre Dame, IN | *Bachelor of Computer Science* May 2027  
Major: *Computer Science* | Minor: *Accounting, Engineering Corporate Practice*  
GPA: 3.831

**Notre Dame Dublin Summer Program** | Dublin, Ireland | *Study Abroad Program* Summer 2024  
▪ Completed an immersive academic and cultural program, gaining insights into Irish history, literature, and contemporary society through coursework and local excursions

**Loyola Academy** | Wilmette, IL | *High School* May 2023  
Clavius Honors Program | 35 ACT GPA: 100.3

## PROJECTS

**Accessible Python Web IDE** | Notre Dame CSE Research | Python, JavaScript, HTML, CSS May 2025 - September 2025  
▪ Developed a fully web-based Python integrated development environment primarily designed to be accessible for blind and low-vision students learning how to code  
▪ Implemented a Python backend utilizing Flask, Docker containers, and a Python sandbox to safely run potentially malicious code  
▪ Designed an accessible web application frontend using JavaScript, HTML, and CSS with full JAWS screen reader compatibility

**Client-Server System** | Systems Programming | C, Python, and Shell Scripting August 2024 - December 2024  
▪ Developed a ZMQ-based Python server to process client requests by filtering JSON data from remote web servers, performing statistical operations, and sending the results back to the C client  
▪ Designed a C client to interface with the Python server, handle user queries for data processing, and manage communication over network sockets using ZMQ for efficient message passing  
▪ Created wrapper shell scripts to streamline the invocation of the C client and Python server, simulating command-line executables for easier user interaction

**Arcade Game** | Fundamentals of Computing | C August 2023 - December 2023  
▪ Developed an arcade game project in C that included pong, flappy bird, and tic-tac-toe games all in one easily navigable user interface using the Notre Dame-designed GFX graphics library

**Engineering Design Projects** | University of Notre Dame | SolidWorks August 2023 - December 2023  
▪ Worked in a team of four to design, 3D print, and test a functional water valve tailored to meet defined customer needs  
▪ Independently designed and 3D printed a customized hat organizer, using SolidWorks to create a practical storage solution

## EXPERIENCE

**Notre Dame Football Student Equipment Manager** | Notre Dame, IN July 2024 – Present  
*Quarterbacks Manager*

- Streamlined football practice operations by organizing and preparing equipment and player gear, ensuring smooth and punctual practice sessions
- Collaborated effectively with coaches and players during practices and games, demonstrating adaptability and composure in high-pressure, fast-paced environments
- Coordinated travel logistics for away games, including managing and transporting two truckloads of equipment, ensuring all gear arrived on time and in excellent condition

**Introduction to Engineering Program** | Notre Dame, IN June 2025 – August 2025  
*Counselor*

- Supported prospective high school students, both, academically and socially during a four-week engineering-intensive program
- Guided students through the design of a Lego NXT robot and a bridge using engineering concepts and programming techniques
- Organized daily activities and chaperoned various fieldtrips to facilitate educational experiences and lifelong memories

**Hesburgh Library Circulation Desk Student Assistant** | Notre Dame, IN January 2024 – July 2024  
*Library Student Assistant*

- Facilitated checkouts, returns, and reservations of books and other library materials for library patrons
- Assisted patrons and campus visitors with locating resources, reserving study rooms, and navigating the university grounds
- Ensured proper organization and accessibility of library collections by shelving and retrieving materials in accordance with established cataloging systems

## SERVICE

**Arrupe Volunteer Service Program** | Wilmette, IL August 2019 – May 2023  
*Volunteer*

- Tutored children and adults from low-income immigrant families at various service sites in the Chicagoland area
- Built houses for the less fortunate through Habitat for Humanity in Chicago, IL and Winona, MN

## TECHNICAL SKILLS and RELEVANT COURSEWORK

**Technical Skills:** C, Python, Java, Linux, JavaScript, SQL, HTML, CSS, RISC-V, Flask, Docker, Excel, SolidWorks, 3D-Printing

**Relevant Coursework:** Data Structures, Systems Programming, Computer Architecture, Theory of Computing, Discrete Math, Logic Design, Fundamentals of Computing, Probability and Statistics