

Ciaran F. Heaney

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EDUCATION

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

May 2027

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