

Joseph Fleming

Computer Science and Philosophy double major at Purdue University pursuing a career in full-stack software engineering.

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Education

Purdue University in West Lafayette, IN

Aug 2021 - May 2025

Majors: Computer Science and Philosophy **Concentration:** Software Engineering

GPA: 3.34

Relevant Coursework: Algorithms and Data Structures, Information Systems and Databases, Software Engineering, Systems Programming, Software Testing, Object-Oriented Programming, Computer Architecture

Work Experience

Undergraduate Teaching Assistant at Purdue University

Aug 2024 - Present

- Led and taught students in a lab and classroom environment to understand core concepts in computer architecture
- Displayed knowledge and capability in the subject matter to effectively convey understanding to students

Personal Projects

Study Aid Webapp

- Worked as part of an agile Scrum team over 3 sprints to deliver a product to a project owner
- Adopted a tech stack consisting of React as a frontend and Firebase as a backend and database
- Planned and completed over 90 collective hours of coding to add features in Javascript and HTML
- Leveraged React, CSS, and HTML to create live collaboration within a rich text editor and database-backed social features such as forum posts and profile pictures.

C Shell

- Created a fully-functioning Unix shell program similar to bash with Flex and Yacc
- Included support for the redirection of stdin, stdout, and stderr for bash commands
- Programmed built-in directory commands like cd, exit, and ls as well as support for subshells, output piping, and wildcard directories using regular expressions

Home File Server

- Built hardware from scratch to serve files to devices connecting to my home network via VPN tunneling
- Installed and configured Ubuntu Server to allow secure connections to outside networks
- Utilized Samba to allow seamless integration with Windows devices connecting to the server

Action Platforming Game

- Utilized multithreaded processing in Godot to run physics, graphics, animations, and sound concurrently
- Developed a custom physics engine with Godot's built in collision detection to make a platformer in which objects move at calculated and precise velocities.
- Created custom interactions between objects to facilitate interesting gameplay experiences
- Diagnosed errors and flaws in the controls, physics, and level design to achieve desired game feel

Leadership Experience

President of Delta Omicron Chapter of Psi Upsilon on Purdue Campus

- Expanded membership by over 200% over the course of 2 years
- Drafted and edited bylaws and judicial procedure to be air-tight, and comprehensive, and accessible
- Instituted policies to support the engagement of Brothers with brotherhood development activities, philanthropic efforts, and community service events
- Led a fundraising effort, raising over \$1,500 with a team of 21 people to support the American Foundation of Suicide Prevention

Technical Skills

Fluent: Java, C, C++, SQL, git, UNIX Shells, Javascript, Node.js, Firebase, HTML, Hardware assembling, Assembly x86-64, CSS, Python

Familiar: Neo4j, Google Cloud, MongoDB, Lua, Java Swing