

Joshua Fouch

github.com/joshuaafouch | linkedin.com/in/joshuaafouch | joshuaafouch.com

OVERVIEW

I am a fourth-year Computer Science major specializing in Systems Reliability, Network Automation, and Backend Infrastructure. I am experienced in architecting fault-tolerant systems, high-availability databases, and concurrent data pipelines to monitor and manage critical enterprise hardware, including vast railroad radio networks.

EDUCATION

Franciscan University of Steubenville

Bachelor's of Science, Computer Science / Minor in Cybersecurity

Steubenville, OH

Expected Graduation: May 2027

- Cumulative GPA: 3.86/4.0 | Dean's List

Relevant Coursework:

Linux & Scripting, Data Structures, Algorithms, Programming Languages, Database Systems, AWS Development, Backend Web Development, Cryptography, Intro to Cybersecurity, Software Architecture, Networking & Telecom

PROFESSIONAL EXPERIENCE

Automation Programming Intern

Alaska Railroad Corporation

May 2026 — Present

Anchorage, Alaska

- Architected a Linux-based observability platform using Django REST Framework and PostgreSQL to continuously monitor 115+ remote industrial radios, serving custom telemetry APIs to PRTG Network Monitor and a centralized web dashboard.
- Engineered a full-stack Django scheduling application deployed on-premise, automating the ingestion of unstructured data to generate visual daily train route graphs.
- Administered on-premise Debian 13 VMs, implementing secure SSH protocols, automation via cron, and robust database retention policies to ensure high system availability.

Computing Curriculum Research

Franciscan University

Oct 2025 — Present

Steubenville, OH

- Researched alongside a C.S. professor on the effects of an extension policy on Computing curriculum and student success.
- Extensive data aggregation, statistical analysis, and data visualization using Python and R scripts on survey responses and gradebook data.
- Officially published a paper for **Frontiers In Education 2026** and will be presented in Paphos, Cyprus later this year.

IT Helpdesk Technician Intern

Dynamic Campus

Aug 2025 — May 2026

Steubenville, OH

- Provided Tier-1 IT support at Franciscan's ITS Helpdesk, diagnosing and resolving issues for a large student and faculty body
- Troubleshoot and repaired software, network connectivity issues, and OS-specific faults across different devices.

Computer Science Teacher Assistant/Grader

Franciscan University

Jan 2025 — May 2025

Steubenville, OH

- Mentored students and graded coursework for the core **Data Structures** course.
- Evaluated student's complex C++ algorithms and graded their coursework.
- Hosted weekly office hours to debug student's code and break down complex OOP concepts.

PROJECTS

Project-lead, Programmer, Text-based RPG (Mop Mania)

Jan 2024 — May 2024

- Directed a 3-person team to architect a terminal-based RPG demonstrating the application of core C++ data structures.
- Managed version control and deployment via Git and successfully presented a live demonstration of the compiled Windows app.

Front-End Developer, Lunar Lander Simulation App

Jan 2025 — May 2025

- Collaborated with a 4-person engineering team to develop a Python-based physics simulation of a spacecraft lunar landing.
- Programmed the GUI and visual rendering pipeline, mapping real-time simulated variables (velocity, acceleration) to dynamic on-screen telemetry.

Web Developer, CollegeLife Recipes Website

Jan 2025 — May 2025

- Developed a responsive front-end web application using Vanilla JS, HTML, and CSS.
- Engineered an event-driven architecture to dynamically fetch and display recipes and images stored in structured JSON files.

CERTIFICATIONS

[AWS Certified Cloud Practitioner](#), Amazon Web Services (AWS)

Nov 2025

EXTRACURRICULARS

IEEE Programming Competition 2025

Oct 2025

- Participated in the IEEE global coding competition with people around the world.

VOLUNTEER EXPERIENCE

Dominican Rite Server Trainer

2018 — 2024

Holy Family Parish

Anchorage, Alaska

- Mentored and taught young men how to serve the Dominican Rite Mass of the Catholic Church.

TECHNICAL SKILLS

- **Programming Languages:** C++, Python, Perl, R, Elixir, Javascript, Bash scripting, Go, SQL
- **Infrastructure & Cloud:** GNU/Linux, AWS, Git, Proxmox, SSH, RESTful APIs
- **Frameworks & Tools:** Django, PostgreSQL, Neovim