Shane Tully

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EDUCATION

Rider University, Lawrenceville, NJ
Bachelor of Science in Computer Science, *May 2027*
Concentration: Software Engineering | Minor: Cybersecurity

RELEVANT COURSEWORK

Data Structures | Algorithms | Full-Stack Software Engineering | Object-Oriented Programming | Discrete Mathematics

TECHNICAL SKILLS

Programming Languages: Python, Java, HTML, CSS
Frameworks & Libraries: Flask, Pandas, flask-login, psutil, customtkinter
Tools & Environments: Git, Visual Studio Code, PyCharm, Linux OS, Windows OS, Microsoft Office Suite, SQL

TECHNICAL PROJECTS

Multithreading Performance Analysis (Academic Research), March 2025

- Authored and conducted a research study on the effectiveness of multithreading as a performance optimization strategy, resulting in a peer-reviewed paper titled *"Beyond Moore's Law: Multithreading as a Modern Performance Strategy"*
- Developed a Python-based program to calculate prime numbers using varying thread counts to measure and analyze execution time and CPU utilization
- Achieved a 73.5% reduction in execution time by scaling from 1 to 6 threads, demonstrating the practical application of parallel computing for CPU-intensive tasks
- Analyzed and documented the impact of the Global Interpreter Lock (GIL) on performance, providing insights into its limitations and proposing alternative solutions

Sigma Phi Epsilon Chapter Management Web Application (Flask), July 2025

- Engineered and deployed a full-stack web application using Python and the Flask framework to manage member data, service hours, and chapter resources for a university fraternity
- Designed and implemented a secure user authentication system with the *flask-login* library to differentiate between admin and regular user roles, ensuring data integrity and access control
- Developed features to parse, validate, and upload CSV files using *Pandas*, automatically updating and displaying a live leaderboard for service hours
- Utilized HTML and Tailwind CSS to create a responsive and intuitive user interface with dedicated dashboards for different user types

LEADERSHIP & COMMUNITY INVOLVEMENT

***VP SLC*, Sigma Phi Epsilon**, Richmond, Virginia *February 2024 – Present*

- Head of Academics and Community Service:
  Hosted multiple asynchronous community service events, such as the Cards for Hospitalized Kids foundation