

Shane Tully

973-862-7066 | tullys@rider.edu | linkedin.com/in/shane-tully-swe/ | github.com/stully18

EDUCATION

Rider University

Bachelor of Arts in Computer Science, Minor in Cybersecurity

Lawrenceville, NJ

Sep. 2023 – May 2027

EXPERIENCE

Vice President of SigEp Learning Community

Sigma Phi Epsilon

July 2024 – Present

Lawrenceville, NJ

- Facilitated 5+ monthly workshops for 35+ members utilizing digital collaboration platforms (Zoom, Slack, Google Workspace), elevating member academic performance and leading to a 20% year-over-year GPA improvement for the chapter
- Directed academic programming and community service operations for 35-member organization, ensuring 100% compliance with chapter standards and university policies
- Organized 5+ philanthropic initiatives including Cards for Hospitalized Kids, coordinating 30+ volunteers and generating 600+ hours of community service

PROJECTS

Net Worth Optimizer | *Next.js, TypeScript, FastAPI, Python, Supabase, PostgreSQL*

Dec. 2025 – Present

- Engineered full-stack financial planning application processing \$10K+ in hypothetical loan scenarios as measured by **15+ RESTful API** endpoints by building FastAPI backend with NumPy optimization comparing debt repayment vs. S&P 500 investment returns
- Secured user financial data across 30+ database tables as measured by zero authentication vulnerabilities by implementing **Supabase JWT tokens** and Row-Level Security (RLS) policies
- Delivered responsive financial visualization interface as measured by 48-month net worth trajectory projections by developing **React** components with **Tailwind CSS** and **Chart.js** integration

PyTorch Malware Detection System | *Python, PyTorch, Scikit-Learn, Pandas, NumPy*

Jan. 2025 – Apr. 2025

- Achieved 96% malware detection accuracy as measured by validation testing on 200,000+ executable samples by fine-tuning 5-layer **PyTorch neural network** with 20+ engineered features
- Reduced false positives by 40% compared to baseline models as measured by precision-recall metrics by implementing robust **Pandas** and **Scikit-Learn** preprocessing with 80/20 train-test split
- Optimized model convergence to 0.04 validation loss as measured by 50 training epochs by configuring Adam optimizer with Binary Cross Entropy loss and DataLoader batch processing of 1,000 samples

Multithreading Performance Study | *Python, Threading, Matplotlib, psutil*

Feb. 2025 – Mar. 2025

- Achieved **73.5% runtime reduction** as measured by 500+ controlled experiments across 6 thread configurations by developing Python prime number calculator with threading module optimization
- Validated multithreading effectiveness through peer-reviewed research as measured by statistical analysis of 100+ test runs per configuration by authoring paper "Beyond Moore's Law: Multithreading as a Modern Performance Strategy"
- Demonstrated **parallel computing** scalability processing 10,000+ prime calculations as measured by CPU utilization metrics by systematically increasing thread count from 1 to 6 threads

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript, SQL (PostgreSQL), HTML/CSS

Frameworks/Libraries: React, Next.js, FastAPI, Flask, PyTorch, Pandas, NumPy, Scikit-Learn, Tailwind CSS

Developer Tools: Git, Docker, AWS, VS Code, PyCharm, Linux, Supabase

Databases: PostgreSQL, SQLite, Supabase