Sean Rettig

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Education

Purdue University West Lafayette, IN
Bachelor of Science in Computer Science, Minor in Mathematics *Aug. 2021 – May 2025*

- Dean's List and Semester Honors every semester
- 3.73/4.00 GPA

Relevant Coursework

- OO Programming
- Programming in C
- Computer Architecture
- Systems Programming
- Competitive Programming
- Elem Linear Algebra
- Foundations Analysis
- Numerical Methods
- Data Mining & ML
- Data Structures & Algorithms

Experience

Software Engineer Intern May 2023 – Present
Midcontinent Independent System Operator (MISO) *Carmel, IN*

- Automated Power System flowgate analysis using Python to decrease required steps by 66% to decrease complexity of coordinating on flowgates with other ISOs
- Implemented multiprocessing to increase throughput of studies by a factor of four
- Centralized execution of studies to decrease worst case runtime by 95%
- Standardized study results into PostgreSQL database for future flowgate analysis

Software Engineer Intern Dec. 2021 – May 2023
Purdue University *West Lafayette, IN*

- Implemented user-requested features in MVC 5 web application using C#
- Updated out-of-date .NET application dependencies
- Compiled information on internal application to improve documentation
- Packaged over 50 applications using Microsoft Endpoint Manager to simplify installation on over 5,000 machines
- Developed installation scripts connecting Endpoint Manager to a custom script for capturing logs
- Captured installation of 20 applications to be used with Apps Anywhere

Projects

Home Lab | *Proxmox Hypervisor, Linux, Docker, Ansible, Nginx* June 2020 – Present

- Established three server cluster to provide a virtualization platform using Proxmox Virtual Environment
- Instituted a game server, media server, and other self-hosted services using Linux virtual machines and Docker
- Developed Ansible playbooks to automate configuration of Debian cloud images
- Configured Nginx reverse proxy to provide external access for self-hosted applications with SSL certificates

Boilercraft Server | *Linux, System Administration* Aug. 2022 – Present

- Managed and maintained multiple Minecraft servers for 70+ unique players
- Ensured server stability and resolved technical issues promptly
- Prioritized security by utilizing Oracle VM as a proxy for all server traffic
- Led a team of 6 to manage a discord server with 800+ members

Cybersecurity Club | *Linux, Windows, Computer Networking* May 2018 – May 2020

- Competed in the AFA's Cyberpatriot competition acheiving Gold Tier first year and Platinum Tier second and third year
- Co-founded the club, leading and creating materials for new members

Technical Skills

Languages: Python, C/C++, Java, Bash, C#
Tools/Technologies: Git, Linux, Docker, Docker Compose, Pandas, VS Code, Visual Studio, IntelliJ, Jira, LaTeX