

Ethan McPhee

(360) 941-8933 | ethan.mcphee32@gmail.com | github.com/emcphee

Education

Washington State University – Bachelor of Science in Computer Science, GPA: 3.86 December 2023

Work Experience

Teaching Assistant, Washington State University – Pullman, WA August 2023 – December 2023

- Developed a web based upload tool for course use in submitting live programming exams
- Led weekly C programming labs for 18 students, providing hands-on guidance in problem-solving
- Provided detailed feedback while grading for programming assignments, exams, and quizzes
- Conducted effective office hours, tutoring students on course material and assignments

Projects

Secure Banking Web Application

- Designed, developed, and deployed a security focused banking application in a team of 4
- Developed in Python using a Django back-end, HTML and CSS front-end, and a PostgreSQL database
- Implemented security features including MFA, geoblocking, two-person-integrity for large deposits and withdrawals, timed automatic sign-out, and AWS CloudWatch logging
- Applied Agile methodologies by working in sprints for streamlined collaboration and iterative development in the project, ensuring timely deliverables

Linux-compatible ext2 File System Manipulator

- Developed a C-based file system manipulator with a user-friendly command-line interface, supporting essential functionalities such as link, symlink, unlink, ls, pwd, creat, mkdir, rmdir, cat, cp, and mv
- Enabled seamless read and write functionality on any valid ext2 disk, with added support for mounting additional disks within the file system for enhanced versatility

Sockets Layer File Transfer and Messaging App

- Created a command-line utility in Python using the socket module with a client-server architecture
- Implemented the transfer of files and instant messages between connected machines
- Designed a custom packet header to allow multiple files and instant messages to be sent simultaneously

Skills

Languages: Python, C, C++, C#, HTML, CSS, SQL

Networking: TCP/IP, DHCP, DNS, VPN, VLAN, NAT, Firewall Configuration

Other technologies: Git, Docker, Windows, Linux

Certifications: CompTIA Security+, Juniper Networks Certified Associate (JNCIA-Junos)

Activities

2023 CrimsonCode Hackathon Upper Division 2nd place

- Developed a web-based multiplayer build-your-own-story game in a team of 4, integrating OpenAI's GPT-3 model within the app to assist players in seamlessly crafting additions to the story

Member of ACM (Association for Computing Machinery), Student chapter