Susan Ann McCartney

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PERSONAL PROFILE

A diligent computer science masters graduate with two years of experience collaborating on software projects and researching ways to improve the next generation of cyber security defenses. Proven success in team collaboration, task delegation, and dependability. Skilled in Python and Java, with exposure to C, PHP, HTML, JavaScript, and Go.

RESEARCH & PUBLICATION

Masters Thesis

A Framework to Assess Bug-Bounty Platforms Based on Potential Attack Vectors · January 2022 - December 2022
· Investigated the metadata for 22 bug-bounty platforms and nine types of malware
· Implemented an observational case study to identify a detailed relationship between malware types and file extensions
· Constructed a framework that determines potential attack vectors based on the lack of restrictions of file attachments for bug reports.
· Researched standards and regulations for presence of malware detection protocols and requirements

RELEVANT WORK EXPERIENCE

Graduate Research Assistant

Montana State University - Software Engineering Lab(SEL)   **December 2021 - December 2022, Bozeman, MT**
· Conducted a detailed analysis of Mitre's Common Weakness Enumeration (CWE-200 Suite) - the exposure of sensitive information to an unauthorized actor.
· Collected information from the National Institute of Standards and Technologies (NIST) on their new project about the Open Security Controls Assessment Language (OSCAL).
· Collaborated with other teammates on the lab's DHS-sponsored research

Software Engineering Intern

Workiva   **May 2021 - August 2021, Bozeman, MT**
· Led the project to automate package version updates using dependabot across the company's repositories
· Used Go and AWS services (such as EC2, S3, and Lambda) to complete infrastructure-related improvements
· Collaborated with remote teammates to review code and prepare infrastructure improvements

Web Developer

Montana State University - Allen Yarnell Center for Student Success   **September 2020 - December 2021, Bozeman, MT**
· Collaborated with teammates in maintaining the university student activity database using JavaScript, PHP, and HTML
· Delegated tasks to developers based on programming difficulty and work availability
· Paired with other developers to debug and test fixes in a local environment before pushing changes to production

EDUCATION

Masters of Science in Computer Science

Montana State University · Bozeman, MT · Dec 2022

INVOLVEMENT

Design Committee Graduate Representative

Montana State University · School of Computing · November 2022 - February 2023
· Collaborates with architects and university staff to design the new computer science building
· Participates in offsite visits to buildings in Seattle and San Francisco for inspiration on building design
· Communicates the concerns of the current working and learning environments from a graduate student's perspective

COURSEWORK

Advanced Software Engineering

Montana State University · Spring 2022 · UML Diagrams, Software Architecture, and Digital Forensics

Computer Security

Montana State University · Spring 2021 · Threat Modeling and Common Vulnerability Exploits