

Susan Ann McCartney

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PERSONAL PROFILE

Skilled software engineer with a Masters degree and two years of experience developing software in Python and Java with exposure to C, PHP, JavaScript, Go, and Dart. Familiar with Angular, React, TypeScript, Vue, and NextJS frameworks. Proven success in team collaboration, task delegation, dependability, and agile methodology.

RESEARCH & PUBLICATION

Masters Thesis

A Framework to Assess Bug-Bounty Platforms Based on Potential Attack Vectors • January 2022 - December 2022

McCartney, S. A. (2022). A FRAMEWORK TO ASSESS BUG-BOUNTY PLATFORMS BASED ON POTENTIAL ATTACK VECTORS (Masters Thesis, Montana State University- Bozeman).

- 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 vendor restrictions on file attachment types for bug reports.

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 team'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

Bachelor of Arts in Music Education

Montana State University • Bozeman, MT • Dec 2017

INVOLVEMENT

Event Coordinator

Montana State University • Spirit of the West Marching Band Alumni • December 2022 - Present

- Coordinates all aspects of the alumni marching band event for Montana State University's 130th anniversary.
- Manages a fundraising event and reserves hotels for participants.
- Communicates with a committee to determine a schedule for a fun filled and entertaining weekend.

Design Committee Graduate Representative

Montana State University • School of Computing • November 2022 - Present

- 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.

SKILLS

Programming Skills: Python, Java, C, PHP, Dart, Go, JavaScript, HTML

Operating Systems: Linux, Microsoft Windows, Mac OS, Android OS