

Muskan Shergill

Education

The Ohio State University

Columbus, OH

B.S. Computer Science & Engineering

3.4 GPA | *Dean's List* SP 22, AU 23, SP 24, AU 24 | *Studio Art Minor* | *Humanitarian Engineering Scholars*

Work Experience

KeyBank – Service Account Governance Intern

Cleveland, OH

May 2024 – Aug 2024

- Contributed to the development and implementation of risk management strategies for newly established Service Account Governance program
- Conducted comprehensive data analysis of service accounts within the company environment
- Analyzed over 50,000 SSH keys, identified non-compliant keys, and reported findings to security team
- Reviewed the effectiveness and completion of over 20 SSH key remediation plans
- Provided feedback on project documentation, cross-team communications, and team objectives.

Skills: Data Analysis | SSH Keys | Identity Access Management | Privileged Access Management

KeyBank – ServiceNow Software Development Intern

Cleveland, OH

May 2023 – Aug 2023

- Completed stories to streamline workflows, update datasets, and meet needs of story stakeholders with the ServiceNow Continuous Improvement Scrum Team
- Engineered a robust Automated Test Framework (ATF) that streamlined testing protocols for Service Catalog updates
- Acquired the *ServiceNow System Administrator Certificate* after completing the *ServiceNow* training
- Researched system capabilities for a custom search feature, documented findings, and relayed information to stakeholders and peer engineering

Skills: JavaScript | Git | Agile/Scrum | CSA certification | Automated Testing Framework

University Libraries - Student Assistant

Columbus, OH

March 2022 – Dec 2024

- Conducted over 1,600 transactions by answering reference, directional, and technology inquiries for patrons
- Collaborated with library and university staff to enhance undergraduate workshops, create patron resources, and develop new training guides
- Managed a team of 6-10 student staff to create an online Bulletin to promote student project achievements and quantitative evidence of our impact at University Libraries
- First author on poster to the Michigan Academic Library Association (MiALA) on the topic of student staff self-advocacy and fair wages in academic libraries.
- Synthesized 5 years of department data into an interactive Excel Dashboard for future reporting

Skills: Microsoft 365 | Team Management | Data Analysis | Excel | Power Automate

Relevant Skills & Technologies

Languages & Frameworks: React, Node.js, Electron.js, Microsoft .NET, C#, JavaScript, HTML, Python, Java, C

Database & Cloud: PostgreSQL, MySQL, Amazon Web Services (AWS)

Tools: Visual Studio, Git, Selenium, Arduino, MATLAB, ServiceNow, Unity, Maya, Unreal Engine

Projects

Water Plant Protect Application

Au 24

- Collaborated with Ohio Cyber Reserve Standards Officer to develop a desktop assessment application to assist and educate water plant employees on CISA CPG cybersecurity at 3,800 Ohio water plants
- Completed CISA Cross-Sector Cybersecurity Performance Goals (CPG) Compliance training
- Designed a user-friendly, interactive CPG assessment to meet the needs of water plant employees
- Built a knowledge base to host over 60 knowledge documents such as risk management plans, incident response plans, and more
- Implemented algorithms to return overall compliance results and suggest knowledge articles based on results

Skills: React | Electron.js | JSON | Cybersecurity Documentation | CISA CPG Certified

Collapsing Drums

Au 24

- Utilized React to create a responsive, user-friendly interface that allows users to stream music, manage concert tickets, and purchase merchandise
- Adopted AWS services such as API Gateway and Lambda to manage serverless architecture
- Configured a cloud databased for efficient data storage and retrieval of users account information, merchandise inventory, ticket management, and music

Skills: React | Node.js | Bootstrap | Amazon Web Services (AWS) | MySQL

Quandary Language Interpreter

Au 24

- Developed an interpreter for custom language (Quandary) that blends function and imperative paradigms
- Implemented key features such as lexical analysis, parsing, and abstract syntax trees (AST) in Java by modifying skeleton interpreter
- Applied memory management techniques, created test cases, debugged errors, and ensure program correctness with automated grading scripts
- Built functionality for concurrency and thread synchronization

Skills: Java | Compiler & Interpreter Design | Lexical Analysis & Parsing | Memory Management | Concurrency

Super Mario 3 NES Remake

Au 23

- Recreated Super Mario Bros 3 with a team of 6 CSE students using MonoGame
- Implemented design patterns and algorithms to manage player behaviors and collision logic
- Applied data-driven approach for managing game assets by utilizing JSON files to store sprite data, level layout, and game object
- Organized scrum meetings, delegated sprint tasks, prepared code reviews, and was main debugger

Skills: C# | Microsoft .NET | Visual Studio | MonoGame | Git | JSON

Publications

Energy Efficient LoRaWAN Protocol in LEO Satellites

Au 24

First Author of Academic Paper, Published to arxiv.org, <https://arxiv.org/abs/2412.20660>

Self-Advocacy of Student Workers for Higher Wage in Academia

Spr 24

First Author of Academic Poster accepted by the Michigan Academic Library Association