

# Muskan Shergill

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## EDUCATION

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### The Ohio State University

*Bachelor of Science in Computer Science & Engineering, Minor in Art*

Columbus, OH

Aug. 2021 – Dec 2024

## EXPERIENCE

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### Software Developer

July 2025 – Present

*Keybank - Commercial Bank Technology*

*Brooklyn, OH*

- Built a .NET automation tool from scratch to validate 100–200 daily post-deconversion invoices, eliminating significant manual review by surfacing only flagged exceptions for QA and Business Analysts.
- Overhauled the UI of an internal web application serving hundreds of commercial banking employees across loan origination workflows.
- Led end-to-end development of the Credit Decision Hub (CDH) integration, authoring technical design documents, implementing REST API logic to ingest and validate Salesforce JSON requests against internal databases, and developing a batch process that invoked LoanIQ SOAP APIs to orchestrate loan origination events. This replaces a legacy nCino/webMethods workflow.
- Upgraded legacy .NET automations and applications from .NET 3.1 to .NET 9.0, ensuring long-term compatibility and maintainability.
- Currently acquiring deep working knowledge of a custom LoanIQ SDK, with a focus toward building internal APIs that enable the loan services team to programmatically trigger loan management operations.
- Built a Playwright test automation suite for Nucleus APIs, enabling comprehensive end-to-end testing across local, IT, and QV environments.

### Security Intern

May 2024 – Aug 2024

*Keybank - Service Account Governance*

*Brooklyn, OH*

- Contributed to the design and implementation of risk management strategies for a newly established Service Account Governance program, helping shape foundational security policies .
- Audited over 50,000 SSH keys, flagged non-compliant credentials, and delivered structured findings to the security team for remediation.
- Tracked and evaluated 20+ SSH key remediation plans, assessing completion rates and effectiveness to ensure accountability.

### Software Intern

May 2023 – Aug 2023

*Keybank - ServiceNow Continuous Improvement*

*Brooklyn, OH*

- Delivered user stories on the ServiceNow Continuous Improvement Team to streamline workflows, update datasets, and meet stakeholder requirements in an Agile/Scrum environment.
- Built a robust Automated Test Framework (ATF) that standardized and accelerated testing protocols for Service Catalog updates, reducing manual QA effort.
- Researched system capabilities for a custom search feature, synthesized findings into documentation, and presented technical recommendations to stakeholders and peer engineering teams.

### Research Coach

March 2022 - Feb 2025

*University Libraries*

*Columbus, OH*

- Handled 1,600+ patron transactions — including reference, directional, and technology inquiries — while collaborating with library staff to enhance undergraduate workshops, patron resources, and training materials.
- Led a team of 6–10 student staff to launch an online Bulletin showcasing student project achievements and quantitative evidence of departmental impact.
- Co-authored a poster presentation at the Michigan Academic Library Association (MiALA) conference on student staff self-advocacy and equitable wages in academic libraries
- Consolidated 5 years of department data into an interactive Excel Dashboard, enabling ongoing reporting and presenting insights to the Research and Learning Collaborative.

## TECHNICAL SKILLS

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**Languages:** C#, JavaScript, Python, Java, C, HTML/CSS  
**Frameworks & APIs:** React, Node.js, Electron.js, ASP.NET MVC, SOAP, RESTful APIs  
**Testing:** Selenium, Playwright, NUnit, JUnit  
**Developer Tools:** Git, Docker, AWS, Visual Studio, VS Code, IntelliJ, Eclipse  
**Libraries & Packages:** EPPlus, MonoGame, Oracle Database Manager, Bootstrap  
**AI & Automation:** Writer AI

## PROJECTS

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- Hackathon: APT Threat Intelligence Dashboard** Oct 2025  
*React · Writer AI · AWS · RESTful APIs* *Live Demo*
- Built a React web application with a team of 6 to aggregate global Advanced Persistent Threat (APT) intelligence, addressing the lack of a standardized tracking database.
  - Integrated Writer AI web scraper agent to pull real-time threat data from reputable news sources and cyber forums, surfaced across a live news feed and structured APT group directory.
  - Designed threat cards consolidating key intelligence per APT group including aliases, country of origin, targeted industries, MITRE framework IDs, CVE IDs, and active campaigns — with filtering, commenting, and file upload support.
  - Embedded a Writer conversational AI agent for on-demand threat research and analyst follow-up queries.
  - Presented to a panel of senior technology executives serving as judges and placed **3rd overall** out of 40+ competing teams.
- Senior Capstone: Water Plant Protection Desktop Application** Aug 2024 – Dec 2024  
*React · Electron.js · CISA CPG Certified*
- Partnered with an Ohio Cyber Reserve Standards Officer and a team of 4 to build a desktop assessment application helping employees at 3,800+ Ohio water plants evaluate CISA CPG cybersecurity compliance.
  - Designed an accessible, interactive CPG assessment in React & Electron.js with color-blind support, font size adjustments, and text-to-speech functionality.
  - Built a local knowledge base hosting 60+ documents including risk management and incident response plans, using local storage for data confidentiality.
  - Conducted field tests at local water plants to evaluate accessibility and usability, then iterated based on findings.
- E-Commerce Site: Collapsing Drums** Aug 2024 – Dec 2024  
*React · Node.js · MySQL · AWS · RESTful APIs · Bootstrap*
- Built a responsive React e-commerce platform supporting music streaming, concert ticket management, and merchandise purchasing.
  - Implemented serverless architecture using AWS API Gateway & Lambda, with a cloud database managing user accounts, inventory, and ticketing.
  - Stored and managed inventory, payment, and shipping data in a MySQL relational database.
- Animated Short Film: Subway Rat** Jan 2024 – May 2024  
*Maya · Procreate · Arnold · Adobe Premiere* *Video*
- Produced a 3D animated short film end-to-end — from concept and storyboarding through modeling, rigging, animation, lighting, and final render.
  - Modeled a stylized Chicago subway scene with custom textures created in Procreate; rigged and animated a stylized rat character.
  - Rendered final scenes in Arnold and composed shots in Adobe Premiere.

## PUBLICATIONS

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- Energy-Efficient LoRaWAN Protocol Optimization in LEO Satellites** Dec 2024  
*First Author · Published to arXiv.org* *arxiv.org/abs/2412.20660*  
*Proposed a protocol reducing energy consumption for IoT communication via low-earth orbit satellites.*
- Raising the Bar: Advocacy for Student Staff Compensation** Spring 2024  
*First Author · Michigan Academic Library Association* *miala.org/2024\_ac\_poster\_session\_informa.php*  
*Leveraged firsthand experience and research to advocate for equitable compensation for student library employees at Ohio State University.*