Professional Biography

Tahreem Khan

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I am currently a Computer Science student at the University of Cincinnati, pursuing a Bachelor of Science with a minor in Business Administration, and am scheduled to graduate in May 2026. Through my academic journey, I have developed a solid foundation in operating systems, computer networks, data structures, and information security, complemented by extensive hands-on experience in programming languages such as C++, Python, Java, MATLAB, HTML, and R, as well as tools including MySQL, Tableau, LABVIEW, AWS, and VBA. My coursework and practical experience have prepared me to approach complex technical problems with analytical thinking, creativity, and precision.

Siemens Digital Industries Software | Developer Co-op
May 2025 – Present | Cincinnati, OH
In my current co-op role, I contribute to the development and enhancement of Siemens' Genesis internal web platform. My responsibilities include resolving functionality and user interface issues using JavaScript, submitting pull requests for peer review, and ensuring seamless deployment of updates. Through this role, I have developed expertise in Mendix low-code platform development, analyzing core applications to identify deprecated logic and optimize the performance of critical applications such as the ResumeBuilder app.

Additionally, I have strengthened my technical documentation capabilities by maintaining detailed Confluence notes, enabling effective knowledge sharing across teams and facilitating onboarding for new developers. This experience has allowed me to integrate both technical and non-technical skills, such as collaboration, communication, attention to detail, problem-solving, and time management, into practical, real-world projects.

Technical Skills Applied: JavaScript, Mendix low-code development, version control (Git), web development frameworks, software debugging, Confluence documentation
Non-Technical Skills Applied: Collaboration, communication, problem-solving, attention to detail, time management

Project Interests

I am particularly interested in contributing to projects offered by GE Aerospace that combine computer science principles with advanced engineering and AI applications. My primary focus is on projects that allow me to leverage my programming, machine learning, and system modeling

expertise to develop innovative, practical solutions. Specifically, I am highly motivated by the following opportunities:

1. **Control System Design with Machine Learning and AI Capabilities:**
    a. The goal of this project is to design a control system that incorporates machine learning and AI to enhance its capabilities.
    b. I am particularly interested in developing methods to constrain the control system to ensure safe, reliable, and deterministic operation.
    c. This project aligns closely with my experience in software development, simulation, and system analysis, and presents an opportunity to combine algorithmic problem-solving with practical engineering applications.
2. **Artificial Intelligence (AI) and Model-Based Design Using BEACON and Simulink:**
    a. This project involves creating a basic control system using BEACON diagrams and leveraging AI to interpret and analyze these diagrams.
    b. I am particularly excited by the opportunity to generate textual requirements from the diagrams, describing the functionality and control flow, and performing a similar exercise for Simulink diagrams and control systems.
    c. The project further involves developing methods to translate BEACON diagrams into Simulink models using AI-generated requirements, bridging model-based design and automated software analysis.
    d. This work closely aligns with my technical strengths in Python, MATLAB, AI/ML, and system modeling, while also providing a meaningful opportunity to apply my analytical and documentation skills in a complex, interdisciplinary environment.