

# Bailey Masters

864-614-9829 | bailey.masters13@gmail.com | btm12.com

## EDUCATION

<b>Clemson University Honors College</b> <i>Bachelor of Science in Computer Science, Minor in Cybersecurity</i>	Expected May 2026 GPA: 4.0
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## WORK EXPERIENCE

<b>Capstone Software Engineer</b> <i>Michelin</i>	Aug 2025 – Dec 2025 <i>Greenville, SC</i>
• Engineered custom code migration pipeline to convert COBOL to Java using multiple LLM-powered backend agents, benchmarking AWS Transform for cost, accuracy, and automation improvements.	
• Collaborated with Michelin engineers to align migration tooling with real-world automotive software needs, presenting findings at weekly reviews.	
• Implemented React frontend pages and connected them to the FastAPI backend through RESTful endpoints enabling real-time communication between the user interface and AI agents.	
<b>Automotive Security Undergraduate Research Assistant</b> <i>TigerSec Laboratory</i>	Aug 2025 – Dec 2025 <i>Clemson, SC</i>
• Modified, reviewed, and validated embedded C code implementing automotive communication protocols to ensure reliable ECU functionality and system performance.	
• Developed a custom C implementation of the SOME/IP network protocol for the Zonal Architecture Testbed (ZAT), adapted from the Python someipy library for embedded use.	
• Assisted in developing a React-based front-end dashboard that enables real-time interaction and visualization of ZAT network traffic and test results via RESTful APIs.	
<b>Cybersecurity Intern</b> <i>Pharmaceutical Associates Inc.</i>	June 2025 – Aug 2025 <i>Greenville, SC</i>
• Enhanced cybersecurity posture by monitoring SIEM alerts, documenting incident response procedures, and maintaining an accurate IT asset inventory for risk assessment and audit readiness.	
• Developed comprehensive cybersecurity policies and procedures by leveraging NIST frameworks (CSF, SP 800-53) to align organizational security practices with industry standards.	
• Performed infrastructure maintenance, including patch management, vulnerability remediation, and automated data backups, ensuring system integrity and compliance with security best practices.	
<b>Software Development Teaching Assistant</b> <i>Clemson University</i>	Jan 2025 – Aug 2025 <i>Clemson, SC</i>
• Facilitated weekly office hours and provided one-on-one support to 100+ students, improving their understanding of Java programming concepts, debugging techniques, and IDE usage.	
• Evaluated 30+ team-based Java projects assessing, industry best practices, SOLID principles, JUnit test coverage, and Git collaboration workflows.	
• Provided actionable feedback on design patterns and anti-patterns, increasing code reuse in subsequent projects.	
<b>Resident Assistant</b> <i>Clemson University</i>	July 2024 – Present <i>Clemson, SC</i>
• Mediated conflicts and facilitated open communication between residents, ensuring resolution and cohesion.	
• Built strong relationships with 90+ residents and collaborated with fellow RA's to organize community events.	

## PROJECTS

<b>Secure Credential Management System</b>	 <a href="https://github.com/baileym12/python-credential-manager">github.com/baileym12/python-credential-manager</a>
• Developed a Python-based command-line application for secure management of API keys, tokens, and credentials using AES symmetric encryption to prevent unauthorized access.	
• Implemented automated credential rotation policies with configurable reminders, integrated detailed audit logging for compliance tracking, and added search and filtering tools to improve usability and efficiency.	

## SKILLS

<b>Languages:</b> Python, C, C++, Java, Bash, SQL, PowerShell
<b>Development:</b> FastAPI, React, Flask, Tailwind, Node.js, Spring Boot, Docker, AWS, RESTful APIs
<b>Cybersecurity:</b> Splunk, Elastic Stack, Wireshark, Nmap, Burp Suite, Nessus, Metasploit, Snort, Scapy