

Experience

Software Engineer I

Microsoft

May 2024 – Present

Reston, VA (Hybrid)

- Spearheading the orchestration of large-scale dataset processing pipelines to enhance the efficiency and accuracy of internet-wide network traffic mapping across various customer clouds, supporting performance diagnostics and global telemetry analysis.
- Leading the development of advanced IPv6 traffic routing strategies, incorporating geolocation, latency-based decision-making, and failover logic to improve end-user performance and resilience of Azure and Microsoft Office products.
- Swiftly implemented a subnet overlap identification algorithm under a strict customer timeline, to efficiently identify and process routing adjustments in O(n) time. This feature utilizes Azure Data Factory and Azure Batch to automate customer-specific network optimization workflows.
- Modernized the Microsoft.FootprintMonitoring resource provider to meet current top-level domain (TLD) monitoring requirements, introducing secure resource type handling and integrating real-time telemetry for improved visibility into global service health.

Software Engineer

U.S. Department of Defense

Jul. 2023 – Apr. 2024

United States

- Created and configured full-stack applications for processing and analytics capabilities.
 - o Develop Python software for backend data processing and transmission.
 - o Deliver components and enhance the user-experience (UX) of a Vue3 frontend.
- Recognized and awarded for demonstrating outstanding initiative, meticulous planning, and implementing innovative solutions to solve complex programmatic issues (see “Awards”).
- Mentored peers in the service and high school work study program to develop technical acumen, pique development interests, and deliver impactful results (see “Awards”).

Application and Software Development Intern

Colgate-Palmolive

Jan. 2023 – May 2023

Piscataway, NJ (Hybrid)

- Developed React components for a revenue growth management analytic tool, implementing drag-and-drop configuration screens, multimedia handling, and UX enhancements.
- Implemented a high-performance asynchronous backend-to-database FASTAPI interface for development efficiency.
- Demonstrated leadership by fostering a collaborative environment for a team of 12 interns through biweekly meetings, promoting cohesion, active listening, and discussion.

Project Manager, OutSystems Developer

YWCC Senior Capstone (Colgate-Palmolive)

Jan. 2023 – Apr. 2023

Newark, NJ (Hybrid)

- Received "Distinguished Project Manager" recognition for exemplary delivery and collaboration, single-handedly leading a team of 6 and contributing across the capstone enterprise.
- Orchestrated the end-to-end development of an employee relations platform using OutSystems, SQL, and JS within a stringent 4-month timeline. Delivered complete documentation, project management deliverables, and a final report, enabling smooth knowledge transfer and an efficient HR workflow for our sponsor.

Software Engineer Intern

The Center for Policing Equity

Aug. 2022 – Dec. 2022

Los Angeles, CA (Remote)

- Enhanced the efficiency of internal CMS post viewer admin tool by developing a type-to-search and refresh component, significantly improving developer workflow and search capabilities for copywriters.
- Established a reusable codebase by creating a set of base classes for chart types, eliminating dependency on sporadic base classes. This approach not only simplified maintenance, but also facilitated seamless updates and scalability.

Application Development Intern

Vanguard

Jun. 2022 – Aug. 2022

Malvern, PA (Hybrid)

- Optimized the new hire onboarding process, reducing the "Time to 1st Commit (T1C)" metric through process analysis and strategic product development.
- Automated the validation process for Coder workspace builds on AWS EC2 by assessing and refining the test process, leading to a 200% increase in bug-fixing efficiency.
- Led a team of 7 interns to create an internal rideshare app, providing technical advice and fostering a collaborative environment.

Research Intern (Advanced Warfighting Technology)

Georgia Tech Research Institute

Jan. 2022 – May 2022

Atlanta, GA

- Engineered a drone control system on Linux that automated, optimized, and executed drone flight missions, designing and 3D printing enclosures for onboard, integrated microcontrollers.
- Designed system of systems architecture diagrams for the 10X Platoon Experiment, providing a comprehensive visual representation of complex interdependencies of the distributed systems.
- Implemented a control system for a mechanical state machine in LabVIEW for bio aerosol processing.

Education	
Bachelor of Science in Computer Science New Jersey Institute of Technology	May 2023 Newark, NJ
<ul style="list-style-type: none"> magna cum laude (GPA: 3.68) 	
Projects	
AIImber AI/ML, High Performance Computing Azure, Python, React	Jul. 2025 - Present
<ul style="list-style-type: none"> Designing and implementing a scalable batch processing service on Azure to automatically detect and trim climbing video clips based on human figure boundaries and edge-detected GROUND/TOP reference lines, reducing manual editing time by over 80%. Developed a computer vision pipeline using Python (OpenCV, NumPy) to identify start and stop frames in videos by tracking human body position relative to scene-specific GROUND and TOP boundaries. Introduced dynamic buffer logic to improve clip completeness by analyzing user-confirmed successful trims and adjusting detection tolerances accordingly, enhancing trim accuracy over time. 	
Sami's Automotive Service Support for You (SASSY) CRM Azure, Python, React	Jun. 2025 - Present
<ul style="list-style-type: none"> Building a full-stack service scheduling platform using React, Python, and Azure, enabling freelance mechanics to manage availability, client requests, and job summaries with minimal manual coordination. Implementing AI-powered request summaries and cost estimations, reducing back-and-forth with clients and streamlining approval workflows for common auto services. Integrating secure phone verification and dynamic calendar scheduling, improving trust, reducing no-shows, and giving mechanics full control over weekly availability. 	
Open-source Contributions various React, Typescript, Python, Kotlin, HTML/JS	Jun. 2023 – Present
<ul style="list-style-type: none"> Contribute to many repositories including college clubs at CarletonU and Woodsworth College, tools like “responsively-app” and ToolJet, companies like Google, Intel, and Epic Games, and a wildlife conservation called The Alveus Sanctuary. 	
Skills	
Programming: Proficient in Object-Oriented Programming (OOP) using C# and Python. Experience in Bash, PHP, Java, and Responsive Web Design (HTML/JS/CSS). Adept in using UML for modeling. Familiar with C and C++. Frameworks: <i>Frontend:</i> Vue.js, React; <i>Backend:</i> FastAPI, Flask, Express Database: MongoDB, PostgreSQL Cloud: Azure, AWS (Elastic Beanstalk, API Gateway, Lambda, DynamoDB, S3), GCP (AppEngine, Firebase, Firestore) Developer Tools: Git (Azure DevOps, GitHub, GitLab, BitBucket), VS Code, Microsoft Visio, diagram.io, Figma, Technical Writing Project Management: Jira, Bitbucket, Confluence, Agile Development/Scrum	
Leadership and Extracurricular Activities	
NJIT Skateboarding Club Co-Founder, Secretary, and Social Media	Jan. 2023 – May 2023
It's Saturday Founder and Development Lead	Jun. 2021 – Aug. 2023
2023 NJIT YWCC Capstone Project Manager	Jan. 2023 – Apr. 2023
Awards	
Team Special Achievement Award U.S. Department of Defense	2024
<ul style="list-style-type: none"> Delivered continuous improvements for network security services and tools to maximize the impact for our customers. Mentored a High School Work Study peer, aiding in troubleshooting code, identifying means to improve the efficiency of the tool, and providing a strategic outlook on how to tackle complex requirements, surpassing leadership expectations and amplifying the experience of the future workforce. 	
Individual Special Achievement Award U.S. Department of Defense	2023
<ul style="list-style-type: none"> Implemented logic to minimize processed data within aggregated files. Based on initial testing, this algorithmic solution reduced the file sizes for playback data by an average of 570%, with negligible impact on sending data to the user interface. 	
2023 Student Intern of the Year New Jersey Career Consortium	Apr. 2023
Distinguished Project Manager Spring 2023 NJIT YWCC Capstone – Dr. Osama Eljabiri, Ph.D.	Apr. 2023