Phone: *(716) 867 - 2025* **Nicholas Ceccarelli** GitHub: *nceccarelli*
Email: *njceccarelli@gmail.com* *Software Engineer* LinkedIn: *nceccarelli*

I am experienced in Internet of Things (IoT) software engineering for both edge- and server-side processes. I have developed software for .NET server applications; iOS apps with Swift UI; systems programming in C and C++; machine learning using Python, TensorFlow, and Keras; and frontend web development in React.

I have worked in a Software Engineering position on the Moog Innovation Team since July 2020. In this role, I have created IoT modules and services applied to IoT-enabled vehicles and factory equipment. I have enabled functionality on both the edge devices, as well as server-side. The software stack for this work includes Microsoft Azure, Docker, Dapr, Kubernetes, C#, & .NET.

WORK EXPERIENCES

Moog, *Programmer/Analyst* Aug. 2021 - Present
- Created a system of services for managing messaging, telemetry, state, & errors for devices:
  - Service that reacts to changes in IoT device state
  - Gateway service for managing incoming API requests
  - Virtual actor service for orchestrating Dapr virtual actors
  - Services to allow administrators to deploy modules to devices individually & at scale
- Contributed to an extensive, expandable framework of telemetry-collecting IoT edge modules for smart vehicles and smart factory equipment that can be customized to client needs
- Maintained & added features to an iOS application to display telemetry data sourced from IoT
- Contribute to forward planning for Innovation Team projects and management

Moog, *Computer Science Intern* July 2020 - May 2021

Ox Intel, *Software Engineering Consultant* May 2020 – Aug. 2020
- Developed a minimum viable product GUI & data storage system for a data-intensive application, which resulted in obtaining a $50,000 Department of Defense grant
- Assisted the Ox team by teaching the basics of software development & cloud computing

EDUCATION

University at Buffalo, The State University of New York Graduated May 2021
Bachelor of Science, ***Computer Science****, Software Systems Focus* GPA: 3.96/4.00
Bachelor of Arts, ***Mathematics***

Relevant Coursework: Software Quality in Practice, Human-Computer Interaction, Software Project Management, Software Engineering

Awards: Engineering Honor Society, Dean's List, Grace W. Capen Scholar, Presidential Scholar

PROGRAMMING PROJECTS

On-Campus Event Manager Android Application Jan. 2020 – May 2020
- Worked on a team of three to design an application using the Agile design process
- Designed the UX for upcoming events, check in, & event creation pages
- Used XML for front end, Java for backend, & SQL for database

UAV Positioning for a Temporary Network Using a Genetic Algorithm May 2019 – Aug. 2020
- Conducted a literary review in the research subject area
- Created a genetic algorithm to optimally place of internet-connected drones to cover a map
- Performed testing & validation against previously existing solutions

C-Standard Compliant Memory Allocator Apr. 2019
- Implemented `malloc()`, `calloc()`, `realloc()`, & `free()` memory allocation functions for the C programming language
- Utilized a multi-pool approach for small allocations & a bulk approach for large allocations

TECHNICAL SKILLS

Programming Languages: C#, Swift, Python, C++, C, Java, JavaScript, HTML/CSS, SQL

Utilities: Dapr, Docker, Kubernetes, Bash, Git/VCS, Microsoft Office, Linux, Mac, Windows

Frameworks: Microsoft Azure, .NET, Android, iOS, React.js, Project Management, Agile Dev.