CRISTIAN POMPEY

(929) 408-3249 | cipompey@buffalo.edu

EDUCATION

Bachelor of Arts: Computer Engineering, University at Buffalo, The State University of New York, Anticipated May 2024

Associate degree: Liberal Arts & Sciences, Onondaga Community College Syracuse, May 2021

- Concentration: Mathematics and Science with computer science classes

TECHNICAL SKILLS

- **Langages/Markups** : java, C/C++, Python, ARM, Bash, HTML, CSS, SQL,
- **Experience**: Systems design, Object Oriented programming, Agile/Scrum development, Embedded systems programming, academic research, Public speaking, teaching, leadership,linux
- **Tools**: Visual studio code, Android Studio, Mbed Operating System, ROS, Microsoft Office, Git/GitHub

WORK EXPERIENCE

Flight Software Lead/Chief Engineer, University at Buffalo Nanosatellite Lab, Buffalo, NY: January 2022 - Present

- Maintained Flight Software Repository clearing bugs and designing tools to automate tedious processes.
- Designed, implemented multi-subsystem software app's using NASA's core Flight System framework.
- Scheduled, wrote agendas for, and ran subsystem leads and flight software meetings.
- Acted as a scrum master for flight software team following agile methodology.
- Wrote documentation detailing mission design and user instructions for future operations team.
- Presented mission purpose, architecture, and progress to stakeholders (AFRL, Moog, PI) consistently.

Teaching Assistant, UB School of Engineering & Applied Sciences, Buffalo, NY: August 2022 - Present

- Taught as a Teaching Assistant for Systems Programming (CSE220) course.
- Taught weekly lab sessions of about 25 students implementing systems algorithms in C.
- Guided students in gaining good programming and debugging practices.
- Held weekly office hours 3 hours a week answering conceptual systems questions and finding bugs.

Research Intern, Summer Research Internship Program, University at Buffalo, Buffalo, NY: June 2022 - July 2022

- Competitively selected to participate in an 8.5-week intensive summer research program at University at Buffalo.
- Paired with a faculty mentor to conduct research on Digital Twin Systems for additive manufacturing.
- Attended and presented at team meetings accompanied by research team and faculty mentor weekly.
- Presented research at a poster conference in front of engineering faculty at the University of Buffalo's downtown campus.
- Developed system design that performed real-time processing of data with multiple distributed embedded systems and routed them to a server that produced a digital representation of system.

PROJECTS

Mecanum Wheeled Robot: C/C++, Android Studio (java)

- Designed and constructed an omnidirectional robot that is controllable from an android app.
- Used interrupts, thread level programming, and synchronization to manage reading sensors on board the robot while also responding to actuator commands from the android app in a real-time operating system (RTOS)

Digital Twin Data Processing: C, Python

- Designed and programmed a bi-directional communication protocol that communicated print health metrics and gcode commands between a 3D printer from a web server for predictive analysis of print.
- Tested communication protocol by streaming data in real-time to web server while it uses the data to create a 3D model of the physical 3D printer and its print.

Breadths-First Search of Buffalo: Scala

- Used a map of buffalo in the form of a graph data structure to calculate the shortest path between any two points on the map.
- Tested routing up to 100 different routes with few edge cases uncovered.