Christopher Coco Jr.

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Education

University of Massachusetts Lowell Sep 2022 – Dec 2025
B.S. in Computer Science, Minor in Mathematics

- **GPA:** 3.8
- **Coursework:** Data Structures and Algorithms, Object Oriented Programming (C++), Software Engineering, Cloud Computing, Computer Security, Analysis of Algorithms, Logic Design, Calculus, Probability and Statistics
- **Activities:** Super Smash Bros. Club President, Cloud Computing Club Secretary

Technologies

Languages: C++, C, Python, Go, JavaScript/TypeScript, SQL
Frameworks and Libraries: Sqlite, Qt, Pandas, React, Matplotlib, PySerial, Next.JS
Other: AWS, HTML, CSS, Node.JS, REST APIs, LaTeX, Docker, Linux, Git, Adobe Photoshop, Adobe Premiere Pro

Experience

Undergraduate Research Assistant, Umass Lowell - Lowell, MA Nov 2022 – Present

- Contributing to the development of an adaptive controller for an exoskeleton arm, that enhances device performance by 50%-80% across various movement tasks.
- Designing and implementing algorithms that use fuzzy logic to dynamically adjust control parameters improving the responsiveness and adaptability of the exoskeleton arm.
- Developed and optimized Python code for seamless interaction between the exoskeleton arm and the operating computer, ensuring precise and reliable operation and data streaming.

Publications

Design of Fuzzy Logic Parameter Tuners for Upper-Limb Assistive Robots Jun 2024

Christopher Coco, Jonathan Spanos, Hamid Osooli, Reza Azadeh

WIP paper at 21st International Conference on Ubiquitous Robots (UR), New York, USA, pp. 386–389, Best WIP Paper Award Finalist

Projects

Trivia Cloud github.com/cjcocokrisp/trivia-cloud

- Created a real-time Trivia Game with AWS interacts with the Open Trivia Database to pull questions from various categories. The entire application was designed to be serverless.
- Implemented a web socket API that handles managing game state and active connections built using AWS API Gateway and written in the Go programming language.
- Stored the game data and state along with active connections in AWS DynamoDB.
- Built the front end of the application in React and stored the compiled app in an S3 bucket to serve to users.
- Automated deployments through GitHub actions to push the latest version on every commit to the main branch.

Club Attendance Bot github.com/UMLCloudComputing/attendance

- Developed a Discord Attendance Bot in Python as an AWS Lambda function to be used by the UML Cloud Computing Club at meetings and to obtain event statistics.
- Utilized DynamoDB as the backend database to store and manage user information and attendance codes, ensuring the data handling is reliable and scalable.
- Implemented validation mechanisms to prevent the reuse of codes and enforce expiration policies for better accuracy.