

# CHRISTINA DAO

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Third year, undergraduate student majoring in Computer Science looking for a detail-focused novice or internship position related to software development.

## Education

### University of Maryland, Baltimore County

August 2020-Present

Bachelor of Science in Computer Science, expected December 2023

- GPA: 3.671
- Scholar of UMBC's Center for Women in Technology Scholars Program

## Work Experience

Research Intern

June 2022-August 2022

### NSF Research Experience for Undergraduates in Smart Computing & Communications at UMBC, Baltimore, MD

- Contributed to a project on Asymmetric Wireless Sensor Networks where we studied system processes of multiple edge devices while running deep learning algorithms. End goal of this continuing project is to optimize the network and run multiple deep learning algorithms concurrently. Nodes will be programmed to communicate data to stronger nodes for more efficient data processing.
- Utilized and modified open-source code and software libraries, including OpenCV, TensorFlow, and YOLOv4, to conduct Object Detection on various Raspberry Pi models
- Developed proficiency in Linux command line and strong troubleshooting skills while installing complex libraries onto the Raspberry Pis
- Programmed two versions (BASH and Python) of a script to extract HTOP system processes data onto .html and .txt files repeatedly on a 30 second interval of time, within a 5-10 minute time frame

## Projects

### Full Stack Text to American Sign Language Translation Web App (React, Express, Python)

- In a team of four, my team collaborated to develop a full stack web app that translated user inputted text to American Sign Language (ASL) videos within 24 hours at HackUMBC and won third place
- Built an API that parsed through user input and web scraped an online ASL dictionary to download corresponding video clips, concatenated the videos, and returned the complete ASL video translation back to the front end

### AVL Robot Swarm Tree (C++)

- Generated a swarm of robot objects organized as an AVL tree by their numerical ID's and added, removed, searched, and edited robots by recursively iterating through the swarm
- Implemented trinode restructuring to ensure the swarm/AVL tree was balanced

### Graph Search (C++)

- Generated a graph data structures by reading in a data file and constructing a linked list
- Implemented recursive functions to traverse the graph and return the path and distance between two nodes

### Stardew Valley Simulation (C++)

- Implemented a simple, text-based version of Stardew Valley by constructing multiple classes with inheritance to a parent class with polymorphic functions

### Telephone Network (Python)

- Simulated a telephone network based on area codes by creating a switchboard, phone, and network objects
- Generated a user interface to direct users to add switches and phones, connect trunklines, or start and end calls
- Program permitted users to save networks into text files and upload networks as well

## Additional Skills

- Technical Expertise in Python, C++, C
- Object Oriented Programming
- Proficient in Linux Command Line
- Experience with Windows, Mac, and Linux Operating Systems
- Strong verbal and written communication skills
- Detail-oriented
- Flexibility and collaborative skills