

## EDUCATION

University of Maryland, Baltimore County, Baltimore, MD

Expected May 2021

- Bachelor of Science in Computer Science

## TECHNICAL SKILLS

### Programing

Python, C, C++, Java

### Web Development

HTML, CSS, PHP, JavaScript, NodeJS, AnjularJS, Rails

### Software

CLion, PuTTY, AutoCAD, Cura, Proxmox, VMWare ESXi, Docker, Eclipse, Git, Microsoft Office (Word, Excel, PowerPoint), Android Studio

### Operating Systems

Windows XP/Vista/7/8.1/10, RHEL/Ubuntu/Unix, FreeBSD, Windows Server 2008 R2 & 2012

## PROJECTS

### FORTH-Like Interpreter

Fall 2018

- Worked to implement an interpreter for a FORTH like programing language in C++
- Developed a lexical parser for interpreting various characters and commands from a text file, placing them in appropriate data structures, and then handling those structures as commands are executed
- Compiled project into a .deb package for easier use on personal server

### Language Grammar Design

Fall 2018

- Designed a context free grammar to follow a given set of rules
- Created a discrete finite automaton based on this grammar and then implemented it in C++ to test large groups of data based on these rules

### QuadTrees

Fall 2018

- Created an implementation of the quadtree tree data structure
- Used quadtrees to create a playable version of Conway's Game of Life

### APRS Packet Generator

Winter 2019

- Developed a Python 3 program on a Raspberry Pi to read data from a weather station and interpret it into meaningful, user understandable information
- Created a system for encoding data into audio packets to be delivered using a ham radio and then published onto the internet, including a personal website

## WORK EXPERIENCE

### Jewish Community Center, *Aquatics Instructor*, Owings Mills, MD

July 2017 – Present

- Worked directly with members across multiple age groups
- Taught a variety of American Red Cross programs and classes
- Led the ongoing training and skill development of staff (making sure staff is certified up to current standards)

### JCC, *Lifeguard & Shift Supervisor*, Owings Mills, MD

May 2017 – Present

- Maintained a safe and welcoming environment in all aquatic areas
- Conducted routine maintenance and pool operation tasks
- Created a rotation/work schedule for co-workers to follow

### UMBC Chemistry Dept., *Lab Assistant*, Baltimore, MD

September 2018 - Present

- Design models/parts to be rapidly prototyped
- Continued maintenance and calibration of lab 3D Printer
- Calculated printing costs and optimal interior design of 3D objects using Cura and Slic3r

## RELEVANT ORGANIZATIONS

### UMBC Student Government Association, Communications Team Member

Fall 2017 – Present

- Collaborated with team members to advertise various SGA events and activities

### Game Development Club, Member

Fall 2018 – Present

- Worked as part of a team to develop (Java, GameMaker Studio, Unity, etc.) and test video games

## ACADEMIC COURSEWORK

Computer Science I for Majors

Computer Science II for Majors

Discrete Structures

Principles of Programming Languages

Data Structures

Introductory Physics I & II

Calculus and Analytic Geometry I

Calculus and Analytic Geometry II

Computer Organization & Assembly  
Programing

Data Visualization

Principles of Operating Systems