

EDUCATION

University of Maryland, Baltimore County, Baltimore, MD

May 2021

- Bachelor of Science in Computer Science, GPA: 3.242
- Honors: President's List, Dean's List

TECHNICAL SKILLS

Programing

Python, C, C++, C#, SQL, Shell Scripting, Assembly, MongoDB

Web Development

HTML, CSS, JavaScript, Bootstrap, jQuery, React, Gatsby, Expo

Software

JetBrains Software Suite, PuTTY, Cura, Proxmox, VMWare Suite, Docker, Git, Microsoft Office, Android Studio, Arduino, Unreal Engine 4

Operating Systems

Windows 10/8.1/7, RHEL/Ubuntu/Unix

PROJECTS

MyGroceryTracker

Fall 2020

- Developed a cross platform mobile application that maintains an inventory of scanned-in groceries.
- Created an application based on the Expo framework for React to handle the user's grocery inventory, including the ability to add and remove items from the inventory by scanning product barcodes using the device's camera.

RSA Encryption Breaker

Spring 2020

- Designed a python version of the RSA keygen algorithm to create a private key using strong primes.
- Implemented a python program to attack the private key using a variety of known methods to factor the sum of two primes.

Impossible Tic-Tac-Toe

Spring 2020

- Developed a new python implementation of the classic game of tic-tac-toe using artificial intelligence that is statistically impossible to beat.
- Created a minimax algorithm as the foundation of the computer player's artificial intelligence.

Kernel Level System Call Blocking

Fall 2019

- Implemented a method of blocking individual sys-calls in the Linux kernel using C.
- Created checks at the kernel level to check a skip list to see if a given system call was blocked by the user.

WORK EXPERIENCE

UPS Information Services, QA and Object Automation Co-Op, Timonium, MD

August 2020 – May 2021

- Improved the automation smoke testing for WorldShip, UPS's large-scale business shipping software
- Developed new methods of testing live updates to actively running WorldShip instances

Booz Allen Hamilton, Software Engineering Summer Intern, Annapolis Junction, MD

June 2020 – August 2020

- Delivered communications solutions over air-gapped networks using technologies such as quiet and android
- Investigated vulnerability of hardware to malicious communications techniques such as audio and RF
- Worked with a team of fellow interns to develop a project, from concept to prototype

UMBC Chemistry Dept., Lab Assistant, Baltimore, MD

September 2018 – March 2020

- Design models/parts to be rapidly prototyped
- Continued maintenance, calibration, and optimization of an industrial lab 3D Printer

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

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| ○ Computer Science I & II for Majors | ○ Design and Analysis of Algorithms | ○ Discrete Structures |
| ○ Principles of Programming Languages | ○ Data Structures | ○ Computer Architecture |
| ○ Calculus and Analytic Geometry I | ○ Calculus and Analytic Geometry II | ○ Computer Organization & Assembly Programming |
| ○ Data Visualization | ○ Principles of Operating Systems | ○ Intro to Artificial Intelligence |
| ○ Database Management Systems | ○ Principles of Software Engineering | ○ Graphics for Games: Unreal Engine |
| ○ Computer Vision | ○ Data Science | |