MARGO BONAL

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Objective: Apply knowledge, skills and techniques used in computer science to assess and evaluate technical problems. Analyze, design, and implement programming and software systems.

Education

Bachelor of Science – Computer Science Pennsylvania Western University, California PA

(GPA: 3.68, Expected Graduation Date: April 2026)

Course Work

CMSC 3040 – Data Structures	**CMSC 3180** – Computer Networking
CMSC 3140 – Analysis of Algorithms	**CMSC 3380** – Python
CMSC 2040 – Object-Oriented Programming	**AEET 110** – Electric Circuits I

Experience

Encompass Remote Corp. & Laura Ohlund (Carnegie Mellon University), Remote Internship

Software Engineering Intern (July 2024)

- Develop internal file sharing platform for company employees
- Enable transmitting/storage of medical grade documents, handling related encryption practices
- Complete Orientation/Workshops/ Worked collaboratively with a team of other interns
- Document front/ back-end process connections/ API
- Create libraries, attributes, UX/UI, GUI, related to platform
- Highlight functionality/ networking related to HIPPA encryption, cybersecurity, Hi-trust certification
- Present final project to team of strategic partners and IT experts for formal feedback
- Incorporate into overall company IT development roadmap

A Storage Place, Hickory PA

Head of Operational Security Systems & Technology Management (2020 - Present)

- Lead operational security of a closed-circuit network
- Completed daily monitoring of facility property
- Perform preventative, predictive, and routine inspection maintenance
- Manage the dispersion of tasks to team members with the relevant skill

Web Development & Social Media Manager (2018 - Present)
- Develop and maintain company's website
- Curate content across social channels ensuring cohesive online branding
- Track, analyze, and report weekly analytics, KPIs, and SEO to management

Ivan's Way Farm, McDonald PA

Boarding Facility Technician (2017 - 2023)
- Efficiently clean and maintain 52 stall horse boarding facility
- Provide daily care, feeding, and health of client horses
- Observe health and behavior, administer assistance, and report to management

Skills

- ***Languages:*** C++, C, Python, Assembly, COBOL, Java, Machine Code
- ***Environments:*** Linux OS, Windows OS, Virtual Box
- ***Development Tools:*** NI Multisim, KiCad, Embarcadero, Vs Code, Visual Studio, MSYS, MySQL, Git/GitHub
- ***Technical:*** Soldering, Wire Wrapping

Awards/Societies

- CS Advisory Board Student Representative, PennWest University – California (2024-Present)
- Vulcan Merit Scholarship (2022 - Present)
- Dean's List/ Highest Honors (2022 - Present)
- Vulcan Programming Club, PennWest University – California
- United States Dressage Federation: Member
- 65 hours of volunteer work through 4-H

Project Highlight

Programming:

Bank Management System (July 2024-August 2024)

Individual Project, Language: Java

- Simulate bank management system with oriented approach, 13 file/class
- Login process, ATM graphics, mini statement, withdraw/deposits
- Implement MySQL database to store user login credentials
- Implement Swing and APIs

Network Simulator (March 2024-April 2024)

Group Project, Language: MASM Irvine 32 Assembly

- Simulate a six-node network topology using an echo and no echo broadcast method
- Write output to screen and output file prompted from user
- Time to live counters/targets updated

Decimal to Binary Converter (Feb 2024)

Group Project, Language: C++

- Prompts/ receives valid decimal integer
- Converts by implementing stack class/operations, modulo division
- Encapsulated Design

Mr. Cowboy (March 2024- May 2024)

Group Project, Language: Python

- 2D Platform Game, Arena Battle
- Created original concept art (Sprite Frames/environmental)
- Multi-filed object-oriented design, implemented classes for modular actions
- Game physics/ frame rate/ multiple game states

Data Base Program (April 2024)

Group Project, Language: C++

- Implement Chain Hashing to sort valid integers into an array of 7 linked lists
- Inheritance to derive database class from list class for data protection
- Implementation of error/validity check
- 5 option menu

Technical:

Intel 8085 Single Board Computer (Jan 2024- May 2024)

Project led by Dr. Anthony S. Pyzdrowski

Skills Acquired:

- Reading/ Interpreting Electrical Component Datasheets
- Create Schematics, Wiring Diagram, PCB Layout
- Soldering, Wire Wrapping
- Programming/ Debugging UARTs