

William Melchor-Guerra

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EDUCATION

George Mason University

BS in Computer Science (GPA: 3.72)

Fairfax, VA

Graduation Date: May 2023

RELEVANT COURSEWORK

- **CS 475 – Concurrent and Distributed Systems**
 - Gained an understanding of distributed systems techniques and infrastructure (RPC, consensus, fault tolerance, consistency, scalability).
 - Used Go to design and implement concurrent and distributed systems.
- **CS 477 – Mobile Application Development**
 - Designed and implemented applications for Android devices using Java and Kotlin.
 - Used threading and networking for mobile applications, as well as gained an understanding of event-based models.
- **CS 471 – Operating Systems**
 - Learned process scheduling, memory management, and file system management techniques.
 - Used knowledge of concurrent operations in C to implement many aspects of an Operating System.
- **CS 463 – Comparative Programming Languages**
 - Mastered basic programming language components such as variables, types, expressions, scope, and control flow in a language independent manner.
- **CS 450 – Database Concepts**
 - Gained an understanding of many database concepts such as the ER model, relational data model, and relational algebra.
 - Created and queried databases using SQL, JavaScript, MongoDB, and Java.
- **CS 483 – Analysis of Algorithms**
 - Learned classical algorithm design and analysis strategies.
 - Algorithms such as greedy algorithms, divide-and-conquer, dynamic programming, as well as graph algorithms.

WORK EXPERIENCE

Installation and Labor Support

General Sheet Metal LLC

Upper Marlboro, MD

February 2021 - November 2021

- Traveled to client worksites to provide construction infrastructure installation.
- Prepared materials for daily operation to streamline workflow and maximize efficiency.
- Oversaw maintenance of clean and safe work environments in compliance with OSHA protocol.

Projects

- **Games in Unity, Python, and Android**
 - Various simple video games such as short side scrolling platformers in Python, a two player Tic-Tac-Toe game on Android that utilizes Firebase, and a clone of Super Mario Bros. in Unity.
- **Stock Market Information Bot**
 - Gives user information on the stock market, such as stocks with the largest gains/losses in a certain time frame, most active stocks, and more.
- **Monopoly Game Simulator**
 - Simulates the game of Monopoly, playing automatically until there is a winner, and gives the stats of the winner to the user with graphs.
- **Various Websites**
 - Websites created using HTML and CSS such as a Netflix clone and my own website.

SKILLS

Technical Skills: C | Python | Java | Arena | SQL | MySQL | O365

Functional Skills: Spanish | Presentation Delivery | Research | Community Work | Event Organizing