

Damian Figueroa

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Education

University of Maryland

August 2021 - May 2025

Undergraduate Student (Cumulative GPA: 3.98)

- Major: Computer Science
- Minors: ACES Cybersecurity Minor & Spanish Language, Culture, and Professional Contexts
- Enrolled in the Advanced Cybersecurity Honors College Living Learning Program.

Wilde Lake High School

September 2017 - May 2021

- Cumulative Weighted GPA: 4.88
- Cumulative Unweighted GPA: 4.0

Work Experience

University of Maryland Laboratory for Neurodevelopment of Reading and Language

April 2022 - Present

Software Developer

- Collaborating with a team to develop a virtual-reality application to assist in the recovery of elderly patients with traumatic brain injuries.
- Utilizing Unity, C#, and the Oculus Interaction SDK to create intuitive mini games which also collect data to analyze each patient's performance for research purposes.
- Creating a custom backend using Linux, Node.JS, and cloud servers to remotely receive patient data and manage their training experience.

University of Maryland Earth System Science Interdisciplinary Center

June 2022 - Present

Software Developer

- Upgraded and optimized an existing Unity application to create a versatile, performant, and easy-to-use virtual-reality weather-visualization application.
- Independently created visualization shaders and C# weather dataset parsers to incorporate climate data relating to the El Niño Southern Oscillation phenomena.
- Adding lightning data from the DCLMA (D.C. Lightning Mapping Array) network into the application to create a 3D visualization of lightning strikes.

Johns Hopkins University Applied Physics Laboratory

June 2020 - April 2021

Software Developer & ASPIRE Student

- Worked alongside a Ph.D. mentor to publish a paper about camera placement optimization (DOI: 10.1117/12.2585649).
- Independently developed an interactive web app using React and TypeScript to visualize concepts related to our paper.

First Tech Challenge: Robocraft #9957

September 2015 - March 2021

Lead Programmer

- Created autonomous and manual-control programs for robots as part of the First Tech Challenge using Java and Android.
- Created a framework for designing autonomous programs that could be executed either completely autonomously or temporarily during manual control.
- Won two "Control Awards" for software design.

Clubs

University of Maryland XR Club

December 2022 - Present

President

- Assisting the president in managing the XR Club and taking action to ensure that the club runs nominally.
- Actively engaging with club members and providing one-on-one office hours to foster a thriving and passionate club community.
- Developing backend and frontend software using Node, React, PostgreSQL, and an Ubuntu cloud server to provide services that help manage the club, such as remote device management and member check-in.

Projects

Virtual-Reality Chess Game

- Creating a virtual-reality chess game with multiplayer support by utilizing the REST APIs of popular online chess platforms.
- Prototyping innovative, responsive, and engaging VR user-interfaces (UI).
- Developing all software for the project using Unity, C#, and OpenXR.

Homemade Virtual-Reality Body Trackers

Present

- Created a set of 3D-printable virtual reality body trackers that use ArUco markers to track a user's body pose.
- Developed a driver for SteamVR using C++ to process tracker information from a UDP connection.
- Developed an iOS application using Swift, Objective-C, and OpenCV to track markers and send the position/rotation data to the SteamVR driver.

Productivity Mobile App

September 2020 - May 2021

- Created a React-Native app using TypeScript to help students manage their procrastination habits.
- App uses a local SQLite database to store student's assignments.
- Tested the app with other students to gather their feedback and criticism.

Website Frontend/Backend for UMD XR Club

Present

- Creating a website to manage various services for the UMD XR Club, such as a device tracker and member check-in portal.
- Using TypeScript, Node.js, Express, and Postgres for the backend, and using TypeScript and React for the frontend.
- Developing a REST API for the frontend/backend to communicate with each other.

Resume Generator

Present

- Built a resume generator (which made this resume) to automatically build tailored resumes based on user-specified criteria.
- Developed using Python and LaTeX.

Team Fortress 2 Price App

2017

- Created a native iOS app in Swift that displays the prices of items in the video game Team Fortress 2.
- App communicates with a REST API to gather pricing information.

School Websites

2017

- Created two websites for my middle school to assist in a "Music in our School Month" event and an enrichment fair.
- Websites allowed visitors to participate in school events by uploading photos and codes to the website.
- Developed the websites using Python, Pyramid, and JavaScript.

Simple Pygame Minigame

2017

- Created a simple minigame in Python using Pygame where the player collects falling items from the sky for points.
- Developed a custom UI system for the game to allow for creating scalable UI elements for various resolutions.

Skills and Abilities

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- Programming Languages: C#, TypeScript/JavaScript, Java, Python, C/C++, Bash, Ruby, and Swift/Objective-C
 - Frameworks: React/React Native, OpenCV, PostgreSQL, Firebase
 - Tools: Unity, Blender, Adobe XD, Photoshop, Premiere Pro, VSCode, JetBrains IDEs