

# WINSTON N. TAN

301-658-8558 ♦ tanwinston217@gmail.com ♦ Boyds, MD  
www.linkedin.com/in/WinstonNTan ♦ https://github.com/winnieftw

## TECHNICAL SKILLS

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**Programming Languages:** Java, C, C++, Python, HTML/CSS, JavaScript, MATLAB, Assembly, Ruby, Ocaml  
**Libraries/Frameworks:** Flask, Pandas/NumPy, Node JS, Express, Jupyter, MongoDB, Junit, Apache  
**Tools/Operating Systems:** Git/GitHub, Windows, macOS, Linux, RESTful APIs, Arduino, Blender, Postman, Anaconda, Google Colab

## EXPERIENCE

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### Acclaim Technical Services (ATS) - SWE/Extended Reality (XR/VR) Intern – Summer 2022

- Used Flask (Python library) and RESTful API to help test and develop the backend of a government prototype. Used Git and HTML to update frontend of prototype.
- Employed RESTful API methods to ingest data such as coordinates onto a Cesium GIS mapping system.
- Tested pre-released software such as Virtualitics (Advance AI Analytics Tool) to filter out data from large datasets (over 180,000 points) to create a pleasing representation and analysis for the customer.
- Deployed Blender to create a variety of 3D models to ingest into virtual reality worlds.
- Developed and delivered a VR Presentation (via Spatial) to the ATS team, showcasing tasks and tools utilized during the internship

## PROJECTS

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### Autonomous OTV Rover, C++, Arduino, Circuit Lab, WIFI Vision System

- Developed an autonomous rover capable of navigating through a course via ultrasonic sensors and a WIFI vision system
- Optimized power output to motors for enhanced course/task completion and navigation
- Lead a team of 7 to build a rover capable of extinguishing and reporting flames using snuffers, flame sensors, WIFI module, and servo motor; budgeted project using Microsoft Excel

### Impact of Per Game Stats on NBA Team Success, Python, HTML, NumPy/Pandas, BeautifulSoup

- Gathered and parsed over 9000 data points regarding the top 50 teams from an NBA database. Focused on the top teams between 2010-2020
- Utilized NumPy, Pandas to bring a thorough analysis of a team's success based on their season's statistics

### Terp Store, HTML/CSS, Apache, XAMPP, Php

- Created a webpage mimicking Terrapin Webstore using HTML and CSS
- Configured Apache and XAMPP to serve the webpage on a local server for testing and developing purposes
- Incorporated several HTML features such as forms, fields, links, and other tags to enable website navigation across multiple pages

### Personal Portfolio Website, HTML, CSS, JavaScript

- Designed a personal portfolio displaying my skills, projects, and personal life via HTML, CSS, and JavaScript

### Shell Project, C, Makefiles

- Developed the guts of a shell that supports Boolean operations, pipes, and file redirection
- Demonstrated proficiency in C programming by utilizing advanced features such as pointers, input/output redirection, makefiles, threads, and processes

## EDUCATION

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### University of Maryland, College Park

May 2024

Department of Computer Science, Computer Science Major

Robert H. Smith School of Business, General Business Minor

## RELEVANT COURSEWORK

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**CS and Engineering:** Data Science; Data Structures; Web Application Development; Object-Oriented Programming; Discrete Structures/Mathematics; Computer Systems; Organization of Programming Languages; Algorithms; Calculus I/II; Differential Equations, Applied Probability and Statistics; Physics I/II; Intro to Electrical & Computer Engineering; Digital Logic Design; Engineering Design

**Business:** Principles of Management, Financial Management, Entrepreneurial Opportunity Analysis; Discovering New Ventures; Accounting, Financial Management