William Carter

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OBJECTIVE

Seeking a Software Engineering internship that allows me to demonstrate my problem-solving skills and explore full-time options.
Availability: Mid-May to End of August 2021.

EDUCATION

Rensselear Polytechnic Institute   September 2020 – May 2024
Bachelor's of Science – Computer Science   Troy, NY

Buckingham Browne & Nichols School   September 2017 – June 2020
AP Scholar Honors   Cambridge, MA
High School Diploma
 ACT 35/36

TECHNICAL SKILLS

Coding proficiency in **C++, C#, Java, Python, JavaScript, HTML5, CSS**.
6 years of comprehensive experience with **Unity Engine** in mobile, web, and desktop projects.
Additional experience with:
- **MATLAB** – Data Analysis and Visualization.
- **Blender** – 3D Modelling and Rendering.
- **Adobe Photoshop** – Graphic Design and Editing.
- **Sketch, Adobe XD, and Figma** – Front-End Mobile Design and Prototyping.

SELECTED COURSEWORK

RCOS - Created a semester-long contribution to the Rensselaer Center for Open Source of my complete design and invention.
Data Structures – studied and created various data structures in the context of practical and efficient use in a variety of short projects over the course of the semester, including pathfinding and resilient image recognition.
Computer Organization – Studied RISC and x86 architectures, digital logic, and low-level system processes, then applied these into a series of short projects.
Foundations of Computer Science – Broad computer science and discrete mathematics coverage extending from set theory and combinatorics, to graph theory and automata theory.

EXPERIENCE

Ace Hardware .   June 2020 – August 2020
Retail Hardware - Sales Associate   Yarmouth, MA
Worked tirelessly to **solve customer problems** and conduct sales, while quickly and efficiently picking up new skills in areas such as glass cutting, framing, plumbing, and electrical work in order to better serve various customer needs.

Zelgor Inc.   June 2019 – August 2019
Mobile Gaming Startup – Developer   Boston, MA
Collaborated with Zelgor's technical lead and other team members to prototype and release a new mobile game. Learned to rapidly iterate in an **agile development environment**, and was responsible for large swathes of system functionality, art, music, and in-game currency. Particular achievements include designing an **efficient and extensible** UI system, solving the rotational tracking dilemma for our unique movement system, and drafting integration of the wave function collapse algorithm for our procedural obstacle generation system.

Massachusetts Institute of Technology   June 2018 – August 2018
Newman Research Lab – Intern   Cambridge, MA
Worked under PhD Candidate James Hermus in the field of Motor Neuroscience. Used **MATLAB** to filter, organize, analyze, and visualize motor data of subjects interacting with a circular constraint. Calculation of the tangential velocity and radial forces from the subsequent graphed data was instrumental in affirming the labs hypothesis on human use of dynamic primitives to streamline motor-neural load.

SELECTED PERSONAL PROJECTS

- Created a personal website using **HTML** and **CSS**.
- Crafted Machine Learning model from the ground up in **Python**.
- Participated in multiple **game jams**, notable creations include a 2D platformer making use of a grappling hook, and a first-person action game involving saving bystanders from city traffic.

LEADERSHIP & ACTIVITIES

Head of the Charles Rower and 3-year **Varsity Team member** while in High School.
Camp Counselor at Mazemakers in Weston MA for multiple years, teaching web design, robotics, game design, and athletic games.
Lead a group of underclassmen to success at a **Model United Nations Conference** at Duke University.

OTHER

Fluent in **Mandarin Chinese** – Completed 7 years of study in the language, spent one month in full immersion in Beijing, Shanghai, Suzhou, and Xi'an.