Jacob Waters

Computer Science B.S.

**Experience**

**Avionics Developer – Beach Launch Team Liquid Rocketry – Summer 2021 – Summer 2022**

* Developed software library for inflight data compression via Bit-Packing using **Embedded C++**
* Applications include packing 8 Booleans per byte, and integers with custom bit-widths
* Setup Ubuntu **SSH server** via **Bash** for remote programming of avionics testing hardware

**Engineering Tutor and Curriculum Design – Monterey Peninsula College – Fall 2021 Semester**

* Developed a CS/EE project for STEM students prioritizing rigor, accessibility, and engagement
* Designed a Coffee-Alarm prototype which notifies you when your drink is the perfect temperature
* Mentored students on coding and circuit design while guiding them through project implementation

**Computer Vision Research – California State University Long Beach – Summer 2018**

* Designed robot parts and electronics cases via **Fusion 360** and **OpenSCAD**
* Oversaw **3D Printing** designed components and learned 3D Printing design constraints
* Worked with my Principle Investigator to debug hardware/software issues

**Projects**

* **Light-Based Alarm Clock - Arduino C++ - 2019**

Designed an RGB alarm clock which simulates a sunrise at a time defined by the user. By using a simulated sunrise in conjunction with a traditional alarm clock, it can help a person wake up more naturally. I learned UI and product Design while leveraging existing C++ and electronics skills to make a product which can both increase the productivity and comfort of the user.

* **Racing Game - Java - 2017**

Implemented Linear Algebra and Calculus skills to build a polynomial spline generator which made levels for a racing game. It was a large-scale programs with dozens of Classes and a hundred of pages of code.

**Education**

* *Bachelor of Science in Computer Science – C.S.U. Long Beach – GPA 3.66 – May 2022*

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| **Programming Languages**   * Java * C++ * SQL * Python | **Have Built Original**   * Linear Algebra Formulas * Calculus Formulas * Novel Algorithms * Large Scale Programs | **Professional Qualities**   * Honest and Hardworking * Open to Criticism * Adaptable and Determined * Kind and Friendly |