

Jacob Waters

A combination of strong creative intuition, proven technical ability, and a can-do attitude make me a solid candidate for any creative role.

Experience

Software Engineer – Applied Materials – July 2022 – Current

- **Designing Python GUI** to interface to legacy tools and perform Automated Testing and Data Logging
- Troubleshoot and fix firmware problems in legacy **C++ code**
- **Technical Lead** on Ethernet-DeviceNet Validation Project

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

- Developed software library for inflight data compression via Bit-Packing using **Embedded C++**
- **Won *Most Innovative*** senior project and \$1000 for team as **main presenter** at Senior Expo
- 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 curriculum** for STEM students prioritizing rigor, accessibility, and engagement
- **Designed a prototype** which notifies you when your drink is the perfect temperature
- **Mentored students** on coding and circuit design while teaching foundational concepts

Projects

Convolutional Neural Network - Python - 2022

- Designed a 10-class image recognition classifier with a 96.5% validation accuracy using **Keras**
- Configured a local Linux installation to run **TensorFlow GPU** via locally hosted **Jupyter Notebook**
- Used a **Docker Container** to manage TensorFlow, Python, and Jupyter dependencies

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

- **Designed an RGB alarm clock** prototype which simulates a sunrise at a time defined by the user
- **Designed a remote** for controlling the RGB Led strip with a remote-locating mode
- Used **MOSFET's** and **DC Power Supplies**, **diodes**, **CAD**, and **soldering**

Racing Game - Java - 2017

- **Designed a large-scale program** with dozens of Classes and over 100 pages of code
- Implemented **Calculus** and **Linear Algebra** skills to build a **spline generator** for easy level generation
- Developed a **novel equation & algorithm** to intersect a moving circle with a polynomial in $O(n)$ time

Education

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

Programming Languages

- Python
- C++
- Java
- SQL

Have Built Original

- Linear Algebra Formulas
- Calculus Formulas
- Novel Algorithms
- Large Scale Programs

Professional Qualities

- Honest and Hardworking
- Adaptable and Determined
- Open to Criticism
- Kind and Friendly