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

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| **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 |