Jacob Hanson-Regalado

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EDUCATION

Diablo Valley College   **Pleasant Hill, CA**
- Major - Computer Science   *Sophomore*
- Relevant Coursework -   GPA 4.0/4.0
    - Data Structures & Algorithms in C/C++
    - Advanced Programming with C and C++
    - Assembly Language Programming
    - Programming with Java

PROJECTS

NeuroCars   **Benicia, CA**
Self-driving Car Simulation   *December 2019*
- 2D self-driving car simulation demonstrating neuroevolution in the browser.
- Agents in the simulation use neural networks to navigate tracks, and iteratively evolve using the genetic algorithm.
- Built with JavaScript using Planck.js for collision detection and ray casting.

Sorting Visualizer   **Benicia, CA**
Educational App   *January 2020*
- Educational tool showing the individual steps of sorting algorithms in a visually pleasing way.
- Users can select various algorithms, pause, fast-forward, restart, and adjust the size/speed of the animation.
- Sorting algorithms included: Heap Sort, Merge Sort, Quick Sort, Radix Sort, Selection Sort, and Bubble Sort.

dvhackers.com   **Pleasant Hill, CA**
Club Website   *November 2019*
- Official website for the Computer Science Club at Diablo Valley College.
- Led a team of 3 club members to build an elegant website that conveys important information about the club.
- Built with JavaScript using React.

CashOut   **Benicia, CA**
Crowdsource ATM App   *April 2019*
- Won first place in DVCHacks 2019.
- Led a team to develop a website where users can post offers to exchange cash for an online money transaction.
- Flask API implementation, handlebars.js front-end templating, SQLite with SQLAlchemy.

EXPERIENCE

Diablo Valley College   **Pleasant Hill, CA**
Computer Science Tutor   *September 2019 - present*
- Tutor DVC students in C++, Java, and MASM.
- Practice creative problem solving, effective communication skills, and programming best practices.
- Keep track of various students' success and adjust study plans to suit their needs.

Physics Institute of Heidelberg   **Heidelberg, Germany**
Research Intern   *July 2018 - August 2018*
- Created various experiments having to do with classical optics and observed official experiments in the Institute.
- Did data analysis on results using Python, NumPy and Pandas.
- Main achievement: building an easy-to-use image capturing module using Python.

Self Employed   **Benicia, CA**
Freelance Web Developer   *September 2018 - present*
- Build modern, maintainable, and beautiful websites for various local organizations/artists.
- Work with a variety of technologies including JavaScript, React, jQuery, and Nginx.
- Built official website (tjef.org) for a local non-profit organization pro-bono, collaborating regularly with the head of the organization to ensure that all needs are/were met.

SKILLS

Python ◆ C++ ◆ HTML&CSS ◆ JavaScript ◆ SQL
React ◆ jQuery ◆ Flask ◆ Nginx ◆ NumPy ◆ Git