

Jacob Hanson-Regalado

✉ jhanreg11@gmail.com 🏠 jacob-hanson.com ☎ 707-934-7532 🌐 github.com/jhanreg11

EDUCATION

Diablo Valley College

Pleasant Hill, CA

- ◆ Major - Computer Science
- ◆ Relevant Coursework -
 - Data Structures & Algorithms in C/C++
 - Assembly Language Programming
 - Advanced Programming with Java

Sophomore

GPA 4.0/4.0

PROJECTS

JCNN

Benicia, CA

Convolutional Neural Network

January 2020

- ◆ Efficient implementation of a convolutional neural network including both back and forward propagation.
- ◆ Interactive demonstration website where users can hand-draw digits and have them classified by a trained model.
- ◆ Built from scratch with Python using NumPy, and Flask.

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 in React that conveys important information.

CashOut

Benicia, CA

Crowdfunder ATM App | DVCHacks 2019 Winner

April 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 and built an easy-to-use image capturing module, using Python, NumPy, and Pandas.

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 non-profit organization pro-bono, collaborating regularly with the chairman.

SKILLS

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