Jason Vega

jasonvega14@yahoo.com · (925) 481-4210 · linkedin.com/in/jason-vega · Pleasant Hill, CA

EDUCATION

University of California, San Diego   La Jolla, CA
B.S. Computer Science *GPA: 3.973*   September 2018 - June 2022 (expected)
Relevant Coursework: Deep Learning, AI: Search and Reasoning, Algorithm Design & Analysis, Advanced Data Structures, Theory of Computability, Discrete Math, Linear Programming*, Statistical Methods, Linear Algebra, Vector Calculus, Differential Equations *(* = in progress)*.

WORK EXPERIENCE

Microsoft   Bellevue, WA
Software Engineering and Program Management Intern   June 2020 - September 2020 (Remote)

- Worked on the new Digital Marketing Center online platform from Microsoft Ads in both program management (weeks 1-6) and software engineering (weeks 7-12) roles.
- Produced a 22 page specification document proposing a new feature, supported by observations from real customer data and with a competitive analysis of four major competitors.
- Implemented a new home page component, including CSS, display logic, responsive layout integration, E2E testing and refractoring of existing code to improve responsive behavior.

Hackingtons Code School   Pleasant Hill, CA
Assistant Instructor   August 2019 - September 2019

- Provided guidance to students ages 8-15 learning web development (HTML, CSS, JavaScript) and game development (C#/Unity, Scratch) in a flipped classroom learning environment.
- Answered students' technical questions and individually checked in with students to evaluate their progress on coding projects.

Diablo Valley College   Pleasant Hill, CA
College for Kids Instructional Assistant   June 2019 - July 2019

- Engaged with approximately 100 students entering the 4th-9th grade over four "Coding & Robotics" course sections utilizing the BBC Micro Bit, Microsoft MakeCode and MicroPython.
- Assisted students with debugging and circuit setup, resolved student disputes and helped to develop and teach two major robotics projects utilizing accelerometer and ultrasonic sensors.

RESEARCH EXPERIENCE

Interpretability Robustness (Honors Thesis/McNair Project)   La Jolla, CA
Undergraduate Researcher   January 2021 - Present (Remote)

- Conducting research under UCSD HDSI Assistant Prof. Lily Weng on improving the interpretability robustness of CNNs for post-hoc interpretability methods.
- Investigating the effects of robustness training on cascading randomization sanity checks and certified interpetability robustness radius.

Historical Document Text Line Segmentation (ERSP Project)   La Jolla, CA
Undergraduate Researcher   October 2019 - June 2020, October 2020 - Present (Remote)

- Currently help UCSD CSE Assistant Prof. Taylor Berg-Kirkpatrick lead a group of four undergraduates on a project to improve text line segmentation on degraded historical documents.
- Contribution has included: proposal writing, literature review, developing automated tools for 1. performance evaluation and 2. ground truth generation, and CNN training and error analysis.
- This project is a CSE Early Research Scholars Program (ERSP) project. As an ERSP participant, I served an additional project management role in the prior team of four undergraduates.

PROJECTS

agora - Cryptocurrency Website (https://agora.bid) October 2020 - December 2020

- Worked in a team of 11 students on a beginner-friendly website that allows users to search for real-time trading prices of cryptocurrency using the most popular cryptocurrency exchanges.
- Utilized React JS to implement the front end for the search page and navigation.
- Provided guidance to teammates new to React JS and worked closely with the back-end team for integration, enabling completion of the minimum viable product within the 10 week time limit.

Java Digit Classifier September 2019

- Implemented a scalable neural network in Java with no external dependencies, featuring the stochastic gradient descent algorithm to recognize handwritten digits in the MNIST data set.
- Wrote a class for matrix operations and a class to read, convert and store binary data.

Symphonic Student Association Website November 2018 - May 2019

- Created a website in a team of six students for the UCSD Symphonic Student Association.
- Utilized Bootstrap to create a responsive layout, the PHP Google Calendar API to retrieve public calendar data, and figured out how to modify the appearance of an embedded Google Calendar.

AWARDS

McNair Program Fellowship University of California, San Diego
To be awarded at the completion of the program for summer research. Summer 2021 (expected)

Alumni Leadership Scholarship University of California, San Diego
A two-year scholarship awarded for college-level academic and campus leadership. August 2020

Violet and Matthew Lehrer Scholarship University of California, San Diego
A two-year scholarship awarded for college-level academic and campus leadership. August 2020

EXTRACURRICULAR ACTIVITES

UCSD ACM AI - Event Lead October 2020 - Present
Design and lead workshops, organize research seminars and lead research paper reading group sessions.

SKILLS

Python, NumPy, OpenCV, TensorFlow, Unix, Docker, HTML/CSS/JS, ReactJS, Bootstrap, Java