# **Edwin Zhang**

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### Education

#### University of California, Santa Barbara, California

September 2019 - June 2023

Master of Science / Bachelor of Science Computer Science

GPA: 3.98

Regents Scholar (top 2.5% of school), College of Engineering Honors Student

Relevant coursework: Probability and Statistics, Game Theory, Artificial Intelligence, Machine Learning, Intro to Data Science, Intro to Deep Learning

#### Palomar Community College, San Marcos, California

September 2018 - June 2019

Relevant coursework: Multivariable Calculus and Differential Geometry, Linear Algebra

### Research Interests

- Machine Learning (AGI, Reinforcement Learning, Deep Learning, Unsupervised Learning)
- Statistical Finance (Econometrics, Stock Market Modeling)

# Research Experience

#### Improving Sample Efficency in DRL (Jiachen Li, Professor William Wang)

Sept 2021 - Present

Project Lead

- Evaluating Soft Actor Critic methods for improving on brittleness in deep reinforcement learning
- Developing experiments as part of Amazon Simbot Challenge Team

#### Biometric authentication with EEG brainwaves (Yi Ding, Professor Tobias Hollerer)

March 2020 - Sept 2020

Experiment designer

- Designed variant of leave one out validation for binary classification on authenticated user
- Created new data loader class with Pytorch to use with Yi's existing EEG CNN
- Wrote up results for publication, submitted to AAAI in September 2020.

#### UCSB Sexuality Research Project (Professor John Baldwin)

October 2019 - March 2020

Backend developer and Webmaster

- Reduced load times by 80% by enabling server and client side caching, increasing monthly viewership by 30% from 40,000 to 53,000
- Lead developer for homepage, topics page, search bar, and FAQ page.

## **Employment History**

#### Stealth

Computer Vision Engineering Intern

June 2021 - Current

Working on something exciting and new!

#### Allthenticate

Lead Fullstack Engineer

Jan 2020 – June 2021

- Led development on cloud platform in early stage startup, architecting scalable and flexible REST API from scratch.
- Taught advanced Vue JS by taking complete responsibility at each step of the development phase delivered full web application while teaching and leading two other interns working on the same project.

- Built and deployed python backend with over 27000 lines to use Elastic Beanstalk, implementing dockerized development process to speed up iteration cycles by 25%.
- Gained experience with emerging web technologies such as JWT, ProtoBuf, and Nuxt.js

#### Yaitea (self-employed)

**Business Owner** 

August 2018 - September 2019

- Assessed a need for tutoring code and critical thinking to children, as programming skills arose in demand and traditional tutoring services struggled to keep up.
- Gained comprehensive experience with Google Cloud, Nginx, WordPress, and Frontend Web Dev through creating the tutoring business' website, at yaitea.com
- Collaborated with several students and parents to create lasting relationships
- Applied ability to learn rapidly and on the fly through the picking up and application of basic marketing to give sales pitches on the tutoring service
- Organized an extensive programming curriculum of 24 lessons
- Taught over 200 hours of coding and critical thinking to students

#### Mathnasium

Math Tutor

June 2017 – September 2017

- Developed robust teamwork skills through daily collaboration with other tutors
- Leveraged detail-oriented personality to precisely record each student's progression through problems, homework sets, and curriculums
- Communicated clear and concise summaries for parents after each student's session
- Began to develop tutoring skills that would eventually evolve into Yaitea.

### Awards and Honors

- First out of 78 in Startup Category at SDhacks, 2021
- Best use of Google Cloud out of 71 at SBhacks, 2021
- First out of 70 in Database Category at SBhacks, 2020
- Second out of 85 in AI classification competiton at UCSB, 2020
- First overall out of 6 at Santa Barbara Startup Weekend, 2019
- Regents Scholar UCSB, 2019
- AP Scholar with Distinction, 2019
- USA Computing Olympiad Gold League, 2018

### **Professional Skills**

Advanced

Numpy/Pandas

Pytorch
Technical Communication (Explaining Code)
OpenAI Gym
Vue JS (Frontend Web Dev)

Intermediate
React JS
Bash Scripting
Flutter
Keras