

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 Efficiency in Deep Reinforcement Learning (Jiachen Li, Professor William Wang) Sept 2021 – Present

Project Lead

- Creating a variation of Soft Actor Critic with Distributional RL for improving robustness
- Developing experiments as part of Amazon Simbot Challenge Team
- Designed a new loss function using Jensen-Shannon divergence rather than traditional cross entropy

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

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 competition 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

Pytorch

Technical Communication (Explaining Code)

OpenAI Gym

Vue JS (Frontend Web Dev)

Numpy/Pandas

Intermediate

React JS

Bash Scripting

Flutter

Keras