Zane Alumbaugh

1195 Cornell Ave | Berkeley CA, 94706 | (510)599-6558 |zanedma@gmail.com

Skills

Python, C/C++, Java, HTML, CSS, JavaScript, Scala, Prolog, Haskell, Unix, Git

Education

September 2017 - PRESENT

University of California Santa Cruz - Santa Cruz CA

- Computer Science B.S. - Expected 2021

SEPTEMBER 2013 - JUNE 2017

Berkeley High School - Berkeley CA

Experience

SUMMER 2019

University of Washington, Seattle WA - *Student Research Assistant/Python Programmer, Funded by the National Science Foundation via a Research Experience for Undergraduates grant.*

- Implement gradient-based learning algorithms for training Generative Adversarial Networks (GANs) using the PyTorch framework; the algorithms are based on a novel hierarchical game theoretic formulation that leads to implicitly defined learning dynamics using second order information on the discriminator loss function
- Implemented an optimizer class for PyTorch that used second-order derivatives to predict future optimizations and allowed for the learning agent to act on these predictions
- Built the foundations for a novel approach to accelerate the GAN learning process by leveraging the eigenstructure of the Jacobian of the learning dynamics

JULY 2015 - JUNE 2017, FEBRUARY 2019

Bay Area Geophysical Society (BAGS), Berkeley CA - *Webmaster, Website creator*

- Created current website from scratch (February 2019) - Employer requested a simple implementation. Used HTML, CSS, Bootstrap and minimal JavaScript
- Kept pages up to date and maintained health of the website (July 2015 - June 2017)

Awards

UCSC Dean's Honors (Winter 2018), City of Berkeley Mayor's Award for Excellence in Sports (2016), ROP Certificate of Proficiency in the Art of Video Production (2016), City of Berkeley Mayor's Award for Extraordinary Effort (2015)

Coursework

Introduction to Programming: Java, Intermediate Programming: Java, Intro to Data Structures, Computer Systems and Assembly Language, Algorithms and Abstract Data Types, Comparative Programming Languages, Advanced Programming, Machine Learning, Principles of Computer Systems Design

References available upon request