

Michael Zhu

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EDUCATION

University of California, Berkeley

Berkeley, CA

- Bachelor of Arts in **Computer Science with Honors** Aug 2019 - Present
- SCET Certificate of Entrepreneurship and Technology GPA: 3.88
- Coursework: algorithms, data structures, computer architecture, artificial intelligence, deep neural networks, reinforcement learning, discrete mathematics, probability, signal processing, iOS development

EXPERIENCE

Amazon, Incoming Software Development Engineering Intern

Starting May 2021

UC Berkeley CS 198 (iOS Development), Lead Facilitator

August 2020 – Present

- Prepared lecture, lab, and project content in Swift; hold weekly lab sections and office hours
- Supervising 3 teaching assistants; led curriculum rebuild from UIKit to SwiftUI framework

UC Berkeley EECS 16B (Designing Information Systems), Lab Tutor

January 2021 – Present

- Review lab materials; assist students during lab sections with debugging and concept checks

Ludwig AI, Software Developer

June 2020 - Feb 2021

- Performed comparative analysis of deep learning models on the Stanford Sentiment Treebank dataset
- Used hyperparameter optimization to achieve state of the art performance with a Bi-LSTM model
- Wrote accompanying article on how to use Ludwig's deep learning toolkit to reproduce our project
- Continuing contributions in bug fixes and new features to Ludwig's open source python library

Organizations

Space Technologies at Cal, Autonomous Rover Team Member

August 2020 – Dec 2020

- Perception stage: used convolutional neural networks for landmark detection and localization
- Planning stage: using trajectory optimization and reinforcement learning methods to find optimal paths

UC Berkeley Residence Hall Assembly, Student Representative

August 2019 – May 2020

- Finance/Operations Committee (Spring): manage the residence hall budget and evaluate cash allocation
- Internal Affairs Committee (Fall): wrote bills to improve RHA bylaws and proposals for on-campus events

PROJECTS

Ugly Video: Less serious video conferencing

Feb 2021

- Used WebRTC and Peer.js to implement real time video and audio streaming between browsers
- Used Fabric.js to implement image sharing and synchronous whiteboard features
- TreeHacks 2021 Funniest Hack winner and top 20 finalist out of 224 teams; demo at <https://ugly.video>

Statfinder: Bag-of-Words and TF-IDF techniques for data extraction of websites

Aug 2020

- Used Flask to create REST API that accepts URL input and returns list of relevant statistics from that site
- Used React to develop frontend that queries REST API and displays output at statfinder.herokuapp.com

Crowd Insights: Real-time computer vision and graph algorithms to analyze crowds

Feb 2020

- Accomplished 30 FPS real-time analysis on live video feeds by utilizing Pytorch, Flask, and GC Compute
- TreeHacks 2020 Geospatial Grand Prize winner and top 8 finalist out of 200 teams

OskiBot: UC Berkeley course recommendation chatbot

Oct 2019

- Created chatbot that recommends UC Berkeley courses using Node, Webex, Azure, and Firebase
- Won CalHacks Cisco API Challenge and Major League Hacking Transposit API Challenge awards

SKILLS

- Languages: Python, C/C++, Java, Assembly (RISC-V), SQL, Swift, HTML, CSS, Javascript
- Technologies: React, Node, Firebase, Flask, Numpy, Pandas, Scikit-learn, Tensorflow, Docker, Linux, Git