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

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 - Present**

- 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

UC Berkeley CS 61A (Structure of Computer Programs), *Academic Intern* **January 2020 – May 2020**

- Helped students during office hours; shadowed my advising student instructor; attended pedagogy training

Organizations

Space Technologies at Cal, *Autonomous Rover Team Member* **August 2020 – Present**

- 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

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 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

Blindsight: Image recognition and voice assistant for the visually impaired **May 2018**

- Created assistive wristband with Raspberry Pi camera module to identify common household objects
- Won 1st Place out of 120+ competing teams at the 2018 Dublin Entrepreneurship Showcase

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