# Daniel Zeng

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#### **University of California, Berkeley**

Computer Science, Bachelor's Degree

*May 2021* GPA 3.95

#### **Relevant Courses**

CS189 - Machine Learning, CS170 - Algorithms, CS188 - Artificial Intelligence, CS61B -Data Structures, CS70 - Discrete Math and Probability Theory, CS61C - Machine Structures, CS161 - Security, CS186 - Databases

#### Skills

**Languages:** Python, Java, C, C++, Javascript,

Golang, Assembly (RISC-V)

**Platforms/Tools:** TensorFlow, NumPy, PyTorch, Matplotlib, Git, AWS, Bash, Pandas, HTML/CSS, Requests, Sockets, JUnit

# **Experience**

# Software Engineering Intern — Microsoft, Azure Production Infrastructure May 2019 - Aug 2019

- Developed tool to generate summary of incidents (incident management) for given timeframe
- Leveraged internal query language to aggregate data and provide statistics to improve livesite review process and highlight impacts on customer experience (e.g. Walmart, Chevron)

# Research Assistant — AutoLab, Berkeley Artificial Intelligence Research Lab Feb 2019 - Feb 2020

- Working under postdoc Ajay Tanwani in Ken Goldberg's lab on machine learning research
- Researching unsupervised domain adaptation using adversarial representation learning
- Implementing adaptation algorithms and network architectures across various datasets

## Project Leader/Machine Learning Developer — Cal Launchpad, UC Berkeley Sept 2017 - May 2019

- Project GrubGen (Jan 2019 May 2019)
  - Lead team of 8 developers to implement GAN models for food image generation
- Project Facelift (Jan 2018 May 2018)
  - o Implemented convolutional neural networks to reconstruct 3D facial volume from 2D image
- Other projects: Project DeepBeat (Sept 2017 Dec 2017), Ford Consulting (Sept 2018 Dec 2018)

## Software Engineering/Research Intern — NASA, Ames Research Center June 2018 - Aug 2018

- Developed an emulator for cyber security attacks on Air Traffic Management (ATM) system using existing ATM Testbed framework
- Built and tested functionality to generate and visualize a wide range of attack scenarios
- Implemented methods to model aircraft trajectory from specified origin to destination
- Created internal tool to configure Testbed framework components for interfacing with emulator

Vice President — Upsilon Pi Epsilon, Nu Chapter at UC Berkeley Research Assistant — Dal Bó Lab, UC Berkeley Dec 2018 - Dec 2019 Sept 2017 - May 2018

### **Projects**

## Chess Game (github.com/daniel-zeng/ChessGame) (Python, tkinter)

- Implemented minimax tree search with Alpha-Beta pruning, and position evaluation functions (piece square tables/piece values) to optimize the AI engine
- Playable through graphical user interface and command-line with algebraic notation

Also on Github: Markov models for text generation, Variational autoencoder for MNIST generation