

Mason Dochterman

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Education

University of California, Berkeley | Berkeley, CA

B.A in Computer Science, Music minor

Expected Graduation: May 2021

GPA: 3.53 (Regents and Chancellor's Scholar)

Relevant Coursework

CS61A (Structure and Interpretation of Computer Programs), CS61B (Data Structures), CS70 (Discrete Mathematics and Probability Theory), EE16A (Designing Information Devices and Systems I), EE16B (Designing Information Devices and Systems II), CS170 (Efficient Algorithms), CS188 (Artificial Intelligence), CS198 (Intro to ML)

Professional Experience

Visa, Inc.

Foster City, CA

Software Engineering Intern

May 2019 – August 2019

- Improved fraud detection/prevention infrastructure using neural networks in Keras (LSTM, RNN, etc.)
- Created a voting-based ensemble using a five-model NLP pipeline to increase fraud detection accuracy by ~10%
- Deployed Machine Learning models on internal testing environment using Docker and Kubernetes

Curtail Security

Santa Barbara, CA

Software Engineering/Data Analysis Intern

May 2018 – August 2018

- Used SQL to identify patterns and outliers in a network traffic data set with over 65 million points
- Single-handedly managed an entire client project and developed a comprehensive report by the end of August
- Developed an automated program using Python to visually model large data sets using different points of interest
- Used Poisson and Gamma distributions and other modeling techniques to develop visual data representations

Leadership and Extracurriculars

Political Computer Science @ Berkeley

Berkeley, CA

External Vice President, Former Project Manager

January 2018 - Current

- Handling external affairs such as member recruitment, contacting potential speakers, and interfacing with professors
- Increased number of active club members by ~100% after first recruiting cycle as External Vice President
- Developed the backend for an Android application designed to display relevant information of bills in Congress
- Managed a team of 8 members and oversaw weekly project meetings and development sessions

UpSync Consulting

Berkeley, CA

Tech Design Committee Member

September 2018 – January 2018

- Interfaced with a mobile payment company to reconstruct their mobile application's user interface
- Used Swift to remove redundancy within the design and to create new features that will improve user experience
- Met with company executives to discuss new design elements and functionality of the application

Dos Pueblos Engineering Academy

Goleta, CA

Console Manager

August 2013 – May 2017

- Programmed an interactive and educational "physics arcade" that was displayed at the 2017 Maker Faire
- Used C++ to program algorithms that control autosolving ball mazes, self-correcting inverted pendulums
- Used JavaScript to program an interactive UI that integrates introductory physics concepts with hardware control

FIRST Robotics

Goleta, CA

Tech Challenge Team Co-Founder

August 2015 – January 2017

- Constructed and programmed a semi-autonomous robot to compete in tournaments across California
- Used collision detection algorithms to control the robot's direction and navigate it safely through the game field
- Engaged with our local community through multiple outreach activities to recruit new members

Skills and Projects

Projects:

- *YouTube Algorithm Recreation:* Uses a feature-based temporal difference learning algorithm to accurately predict the growth of a YouTube video over time given relevant statistics (watch time, clickthrough rate, etc.)
- *Chat Bot:* Uses Natural Language Processing to appropriately respond to possible user inputs (in progress)

Technical Skills: Java, Python, SQL, Docker, Kubernetes, Keras, TensorFlow, PGAdmin, Dart, Flutter