

# William Arnold

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## EDUCATION

University of California, Berkeley, College of Engineering Class of 2021  
BS – Electrical Engineering and Computer Science Major, Math Minor  
GPA: 4.0, Highest Honors, University Medal nominee

*With a focus on*  
Reinforcement Learning  
Applied Cryptography

## EXPERIENCE

### Eluvio

*Cryptosystems Intern*

Berkeley, CA

*June 2020 — August 2020*

- Built a key–splitting and distributed trust scheme to secure high value assets in a federated system.
- Designed and implemented a prototype consumer–scale, identity–based asset access scheme to allow content secured by an ethereum–backed system to be securely and efficiently managed.

### Procore Technologies

*Machine Learning Intern*

Santa Barbara, CA

*June 2019 — August 2019*

- Combined supervised image encoding with a Gaussian-based clustering algorithm in order to find latent classes in a dataset of construction images. This successfully produced a low-noise dataset 8x larger than any existing dataset and greatly increased model performance.

### UC Berkeley

*Undergraduate Student Instructor & RL Researcher*

Berkeley, CA

*2018 — current*

- Taught undergraduates taking discreet math and probability theory (CS70) in person and virtually, including topics such as Galois Field Theory, Countability, Berlekamp-Welsh, and Probability Theory. Held office hours, proctored, and graded exams.
- Developed an RL Agent controller for Demand Response in energy grids, working in Prof. Costas Spanos' group. Developed novel techniques to improve the agent's fairness and speed of learning using uniform quadric sampling and surprise minimization. Publications pending experiment at SinBerBEST in Singapore, beginning in March 2021.

### Activate Inc., at Google

*Technical Lead*

San Francisco/Berkeley, CA

*February 2016 — August 2018*

- Organized and implemented a feature–diverse, spatial, unsupervised machine learning algorithm to identify the most attractive food concepts around 50+ locations in the Bay Area for a Fortune 500 company.
- Built a deep learning–based model to predict how individuals move and eat in Google Cafes to reduce food waste and ensure more effective resource utilization in future Google buildings.

### Skydeck Berkeley

*Data Analyst and Ambassador*

Berkeley, CA

*July 2016 — July 2018*

- Developed a data analysis tool to measure Skydeck event attendance and effectiveness among startups.

### Gradescope

*Android Developer*

Berkeley, CA

*September 2014 — July 2016*

- Designed and built a comprehensive beta Android app for students to enhance mobile the student homework submission experience.

## ACTIVITIES

### Cal Sailing Team — Varsity Skipper and Fleetmaster

*August 2018 — current*

Sailed for UC Berkeley and maintained FJs at Treasure Island Sailing Center, competing in Pacific Coast Conference Regattas. Bowman, Skipper in Big Sail 2018,2019 against Stanford in J/22s at St Francis Yacht Club. Held racing tactics and sail trim lessons for team members.

## SKILLS AND RELEVANT COURSES

Quantum Computing  
Data Analysis  
Machine Learning

High Performance Computing  
Distributed Computing  
Reinforcement Learning

Efficient Algorithms  
General Relativity  
Probability Theory

Discrete Math  
Honors Linear Algebra  
Honors Analysis