Edward **Cen**

edwardcen@berkeley.edu | edwardcen.com | github.com/edwardcen | linkedin.com/in/edwardcen

Education

University of California, Berkeley — *Berkeley, CA*

B.S.E in Electrical Engineering and Computer Science — *May 2021*

- Relevant Coursework: Data Structures, Algorithms, Computer Architecture, Operating Systems, Machine Learning, Discrete Math and Probability, Stochastic Processes, Linear Algebra, Data Science, Quantum Mechanics, Electromagnetism and Optics, Classical Mechanics
- GPA: 4.0, Eta Kappu Nu EECS Honor Society

Bellaire High School — *Houston, TX*

High Honors Magnet Diploma — *May 2017*

- Valedictorian – Rank 1 out of 765 students, SAT: 2370, GPA: 4.0, National Merit Scholar, Congressional Award Gold Medal

Technical Experience

Stripe — *San Francisco, CA*

Machine Learning Engineering Intern — *May 2019 - Aug. 2019*

- Reduced merchant-level fraud rates by 10% by exploring filtering logic and weighted sample points to improve model
- Created first iteration model that targets fraudulent businesses using existing features with 50% improved recall over existing model
- Developed backtesting methodology to evaluate models on historical merchant data that accounts for first time to reject

Berkeley EECS Department — *Berkeley, CA*

Academic Student Employee — *Jan 2019 - Current*

- Undergraduate Researcher - Working with Daniel Seita under Professor Ken Goldberg in the AUTOLAB to develop deep reinforcement learning policies for robotic cloth folding
- Reader for CS70 (Discrete Math and Probability Theory) - Grade weekly homeworks and help students during office hours

Two Sigma Investments — *Houston, TX*

Software Engineering Intern — *May 2018 - Aug. 2018*

- Built Bayesian optimization-based service to automatically optimize runtime of Spark pipelines with up to 30% improvement
- Created unsupervised learning model for geospatial datasets which increased persistence of spatial clustering to over 99.9%
- Worked extensively with noisy log-normal data and wrote internal tools to monitor and remove noise

Nommery — *Berkeley, CA*

Data Analytics Intern — *Sep. 2017 – Dec. 2017*

- Segmented Nommery's users by motivations and interests and discovered meaningful correlations using Pandas and Jupyter Notebook
- Summarized research and generated data visualizations using Seaborn about user base clusters for marketing

Projects

PintOS

- Extended the PintOS, a barebones operating system for the 80x86 architecture by implementing priority scheduling and concurrency
- Added support for user programs by creating a suite of syscalls and incorporating a buffer cache for the filesystem

Settlers of Catan AI Strategy

- Designed an AI strategy to play a version of the popular Setters of Catan game in a multiplayer, simultaneous action setting
- Used a MCMC to heuristically evaluate the score of actions at each time step and used dynamic programming to find optimal series of actions
- 2nd place strategy in EE126 (Probability and Random Processes) competition

Halite II AI Challenge

- Designed heuristic-based resource allocation algorithms to ensure a distribution of ships which minimized threats and maximized mining potential
- Implemented efficient algorithm for multi-agent pathfinding to avoid collisions which reduced pathfinding runtime by over 50%
- Top 5% of all competitiors, 1st Place Winner at Berkeley Halite Hackathon

Honors & Awards

Accel Scholar, Network led by Accel partner — *May 2019*

Dean's Honors List, Top 10% semester and overall GPA for College of Engineering undergraduates — *Dec. 2017 - Current*

US Physics Team, Gold Medal on US Physics Olympiad — *Jun. 2017*

Skills & Interests

Languages- Python (Proficient), Java (Proficient), C (Proficient), SQL (Proficient), JavaScript (Familiar), HTML5/CSS3 (Familiar)

Tools & Packages- Bash, LaTeX, AWS, Spark, HDFS, NumPy, Pandas, Scikit-Learn, XgBoost, Pytorch, React.js, Node.js & Express.js