Arnold Cai

+1 (925) 568-6380 | caiarnold8@gmail.com | linkedin.com/in/arnold-cai | github.com/ltcyb

Education

University of California, Berkeley GPA: 3.76

Computer Science B.A. *May 2026*

- **Current Courses**: Machine Learning, Probability Theory and Stochastic Processes, Computer Vision and Computational Photography
- **Past Courses**: Algorithms, Data Structures, Convex Optimizations, Linear Algebra, Data Science Principles, Computer Architecture
- **Honors**: Upsilon Pi Epsilon (UPE)

Technical Skills

Languages: Python, R, Java, SQL, C, C++, C#, Javascript, HTML/CSS, RISC-V, Scheme (Lisp)
Tools/Frameworks: PyTorch, Polars/Pandas, Numpy, Matplotlib, JupyterLab, OpenCV, React, NodeJs, Express, Unix, Git, Unity

Experience

Berkeley Brothers

Data Research Intern *Jun 2024 – Aug 2024*

- Implemented an algorithm to efficiently filter and analyze 20 GB of market data using Polars, Numpy
- Built webcrawler to gather multiple exchanges' market data for analysis using NodeJs
- Created a system in C++ to receive and decode SBE packets from broker apis
- Analyzed high volatility market options and designed algorithm to detect volatility spikes

IBM Accelerate

Software Engineer Track *Jun 2024 – Aug 2024*

- IBM's univeristy program for training students how to navigate the corporate world and software engineering
- Learned how to communicate and network with fellow colleagues from the same industry
- Learned how to integrate generative AI into React and Nodejs applications and developing with cloud based solutions

ezML

Machine Learning Intern *Feb 2023 – May 2023*

- Interned for a computer vision as a service Berkeley Skydeck startup
- Trained computer vision YOLOv8 and TrackNet keypoint models with PyTorch and Tensorflow
- Designed object detection algorithms fast moving small objections for live video feeds
- Utilized OpenCV to visualize bounding boxes and keypoints

UC Berkeley EECS Department

CS 61A Teaching Assistant (UCS1) *Aug 2023 – Dec 2023*

- Hosted Office Hours and Tutor Sessions for a 1300+ student class
- Drafted and wrote Discussion, Lab, Homework, and Project problems
- Content Covered: Recursion, High Order Functions and Currying, Iterators and Generators, Trees, Linked Lists, Object-Oriented Programming, Interpreters
- Languages Covered: Python, Scheme, SQL

FIRST Tech Challenge Robotics Team - Mind 17759

Cofounder/Software Lead/Mentor *Nov 2019 – May 2022*

- Used Java to create robot localization system with a sensor fusion algorithm using odometry wheels, gyroscope, and distance sensors
- Designed an object detection algorithm with OpenCV gaussian blurs and hough line detection
- Managed team by hosting scrums via Trello and scheduling action items
- Mentored team after going to college by giving programming and scheduling advice