

David Ho

Chicago, IL | 630-605-9689 | dho92560@usc.edu | [linkedin.com/in/dvsho](https://www.linkedin.com/in/dvsho) | github.com/dvsho

EDUCATION

University of Southern California

Computer Science, B.S. + Financial Engineering, M.S.

August 2022 - May 2026

GPA: 3.80

Relevant Coursework: Software Engineering, Artificial Intelligence, Operating Systems, Internetworking, Algorithms, Data Structures, Applied Python, Probability Theory, Multivariable Calculus

Extracurriculars: Business Technology Group, Asian Pacific Cinema Association, Student Symphony Orchestra

PROJECTS

Poker Bot

September 2024

- Designed and implemented **neural network** to predict optimal poker moves based on player hands, table cards, and opponent actions
- Preprocessed and encoded** poker data for model training, enabling effective representation of game states
- Trained the model on simulated game data, **improving decision-making accuracy by 15%** after training on 10,000 simulated hands
- Utilized: **Python, Numpy, Tensorflow, Scikit-learn (supervised machine learning)**

Options Trading Bot

July 2024

- Developed automated bot for trading options contracts using **Interactive Brokers Trader Workstation API**
- Implemented strategy to buy and sell call options based on **real-time** moving average thresholds using **multithreading** for reduced latency and **error handling** to ensure robust and reliable trading operations
- Tested and validated bot through historical data, **increasing profitability by 8%** during backtesting
- Utilized: **C++, JSON for Modern C++, real-time data processing (algorithmic trading)**

StoreIt

November 2023

- Led team to develop web app for students to rent storage spaces near USC campus with interactive map using **Google Maps API**, review system, and seller system to post and manage listings
- Implemented **chat and file upload feature** between customers and sellers using React user interface, Node.js back end, Java servlets with AJAX, and MySQL database to store information
- Held weekly **scrum meetings** to coordinate strategy, ideate, debug, and run tests for quality assurance
- Utilized: **Java, MySQL, HTML, CSS, JavaScript, React, Node.js, Git (full-stack development)**

Custom Cache with Dynamic Memory Allocation

November 2023

- Replicated behavior of CPU cache, **handling memory traces** with FIFO and LRU eviction policies
- Independently implemented malloc, free and realloc functions for **improving memory modification efficiency by 15%**
- Utilized: **C, Linux, Docker (computer architecture)**

EXPERIENCE

Course Producer

August 2023 - Present

USC Viterbi School of Engineering - Los Angeles, CA

- Lead 7 hours of office hours weekly, teaching 300+ students to master **Java, C and x86 assembly programming**, resulting in **15-point increase** in median assignment grades after 10 weeks
- Analyze data and feedback from assignment and exam grades to implement targeted strategies to **address shortcomings in class curriculum** with goal of improving student performance and comprehension

Data Engineering Intern

June 2023 - August 2023

Federal Reserve Bank - Chicago, IL

- Scanned and migrated thousands of physical document archives to Federal Reserve's **online NED server using Python and MySQL**, making files searchable by keyword through Federal Reserve's servers and **strengthening bank's security and backup systems**; received recognition from Federal Reserve Board of Governors for completion of project
- Used **Python libraries** to filter, edit, and send Excel data through Microsoft Exchange, **saving legal team over 2000 work-hours** in determining which documents in archives had received clearance for declassification or destruction

SKILLS

Code: C/C++, x86 assembly, Python, Java, MySQL, HTML, CSS, JavaScript

Technologies: React, Node.js, Git, Pandas, Numpy, Tensorflow, Scikit-learn, Unix, Linux, TCP/IP, Docker

Methodologies: Agile, Scrum, unit testing

Certifications: Akuna Capital University Options 101

Languages: English, Mandarin, Spanish