

# Owen Halpert

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## EDUCATION

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### University of California, Berkeley

Berkeley, CA

*Bachelor of Arts in Computer Science, Music Minor*

*Aug. 2020 – May 2024*

- GPA: 3.9
- Relevant Coursework: Efficient Algorithms, Artificial Intelligence, Cybersecurity, Data Science, Data Structures and Algorithms, Structure and Interpretation of Computer Programs, Machine Structures, Discrete Math and Probability Theory, Linear Algebra, Introduction to Cloud Computing, Database Essentials in AWS
- Involvements: Computer Science Mentors, Berke1337 Cybersecurity, SUPERB Sneak Previews, Camp Kesem

## EXPERIENCE

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### Software Developer Engineer Intern

Jun. 2023 – Aug. 2023

*Amazon Web Services, OpenSearch*

*East Palo Alto, CA*

- Developed, tested, and presented a proof of concept for a new caching system on AWS's search and analytics suite
- Improved average search query response time by up to 300x by implementing disk-based caching functionality
- Used third-party libraries such as Ehcache and Kryo Serializer to completely overhaul the existing search cache
- Automated testing workflows with data visualization and analysis using matplotlib, openpyxl, and Slackbots
- Organized regular check-in meetings to discuss project status, identify potential blockers, and receive feedback
- Clearly and concisely presented technical concepts and outcomes to both technical and non-technical stakeholders

### CS61A Course Staff

Aug. 2022 – Jan. 2023

*University of California, Berkeley*

*Berkeley, CA*

- Held a course staff position for Berkeley's introductory Computer Science class, CS61A, with over 1800 students
- Led a weekly section of 35 beginner students through a mini-lecture and help them through a relevant worksheet
- Walked students through weekly lab assignments in Python, helping them with conceptual ideas in programming

### Wealth Management Intern

May 2021 – May 2022

*Trace Wealth Advisors*

*Los Angeles, CA*

- Led monthly reporting and analysis for 22 individual investor accounts with assets totaling over \$100 million
- Identified and optimized inefficiencies in reporting strategy using financial data analysis tools like Orion and Arch

### Growth and Operations Intern

Sep. 2020 – June 2021

*Florian*

*Remote*

- Headed outreach strategy to reach over 1000 unique alumni, find new investors, and build a network of mentors
- Generated alumni leads by utilizing an email blast program to set up personal meetings with 100+ investors

## PROJECTS

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### Handwriting Classifier | *RISC-V Assembly*

Sep 2023

- Implemented a neural net machine learning algorithm to classify handwritten digits from the MNIST dataset
- Added functionality to read and process input vectors with helper functions such as ReLU, Argmax, Dot Product
- Followed RISC-V calling convention and handled memory management with compilation and debugging tools

### Coachella Over The Years | *Python, R* [owenhalpert.com/compmusic](https://owenhalpert.com/compmusic)

May 2023

- Led a comprehensive analysis of the evolution of genres, artists, and audio features at Coachella Music Festival
- Analyzed musicological metrics from the Spotify API such as the changing danceability levels over several years
- Visualized metrics with chromagrams, dynamic time warping, cepstograms, chordograms, and tempograms

### Gitlet | *Java*

May 2022

- Developed a functioning version control system similar to Git with commit, reset, checkout, and merge commands
- Serialized files and used Java File I/O methods to mimic the tree-structured internal Git folder structure
- Created a detailed and deliberate design document to choose each data structure and algorithm effectively

## SKILLS, AWARDS AND INTERESTS

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**Skills:** Python, Java, C, Git, Linux, SQL, Cloud Computing (AWS), Excel, IntelliJ, VSCode, Jupyter, Numpy

**Awards:** Upsilon Pi Epsilon, Dean's List, Eilber Scholar, Harry J. Breithaupt, Jr. Scholarship, Renaissance Award

**Interests:** Puzzles, standup comedy, improv, escape rooms, cybersecurity, Youtube video essays, crosswords