

Sean Fuhrman

<https://www.seanfuhrman.com>

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EDUCATION

• University of California, San Diego

San Diego, CA

Bachelor of Science in Computer Engineering; Major GPA: 3.9; GPA: 3.77;

Sept. 2020 – Present

- **Awards:** Provost Honors
- **Coursework:** Object Oriented Programming, Advanced Data Structures & Algorithms, Computer Architecture, Probabilistic Machine Learning, Web Client Languages.
- **Extracurriculars:** Data Science Student Society, Ski & Snowboard Team, Alpha Epsilon Pi Philanthropy Chair, Sailing Club

EXPERIENCE

• Art of Problem Solving

San Diego, CA

Software Engineering Intern

June 2023 - Present

- **Tools:** Javascript, SQL(Postgres), HTML/CSS, Git, React, Node
- Created internal infrastructure to automatically convert web pages into printable versions; Utilized for expanding educational material options to more schools.
- Conducted prompt-engineering investigation into utilizing OpenAI API to translate custom markup language.

• System Energy Efficiency Lab

San Diego, CA

Research Internship

July 2022 – Present

- **Tools:** Python, PyTorch, NumPy, Pandas, Matplotlib
- Assisted with research on hyper-dimensional computing algorithms and its use for energy-efficient processing-in-memory machine learning.
- Wrote research paper on combining metric learning with hyper-dimensional computing algorithm to increase model accuracy and error robustness.
- Developed Python model to simulate machine-learning algorithm running on error-prone hardware, and then analyze results.

• Game-U

Flemington, NJ

Teacher's Assistant Internship

2016

- **Tools:** JavaScript, C#, Unity
- Teacher's assistant for after school programs and summer camp to teach children video game programming

PROJECTS

• Shazam 2.0

- **Tools:** Python, PyTorch, Pandas, Matplotlib
- Shazam-like music genre classification model trained on the Million Song Dataset. Achieved 99.6% accuracy on over 200,000 songs

• Personal Website

- **Tools:** Javascript, HTML, CSS
- Designed and programmed my own resume website at [seanfuhrman.com](https://www.seanfuhrman.com)

• LED Infinity Mirror

- **Tools:** Arduino, C
- Hand-Built LED infinity mirror with color-changing LED strip.

• Room Automation System

- **Tools:** Python, C, Raspberry pi, Arduino, Speech Recognition Library, RESTful APIs
- Designed, prototyped, and debugged microcontroller system designed to act as “assistant” via voice commands
- Capable of controlling lights, telling the weather, and playing music

SKILLS

- **Programming Languages:** Python; Javascript/HTML/CSS; SQL; C++/C; Linux/Shell
- **Tools:** GitHub; VS-Code; MS Office; Word; Excel; Google Suite
- **Libraries:** PyTorch; NumPy; Matplotlib; C++ STL
- **Hardware:** Raspberry Pi; Arduino; designing and soldering circuits