

## EDUCATION

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- **University of California, San Diego** San Diego, CA  
*Bachelor of Science in Computer Engineering; Major GPA: 3.9; GPA: 3.77;* *Sept. 2020 – Present*
  - **Relevant Coursework:** Object Oriented Programming, Advanced Data Structures & Algorithms, Computer Architecture, Probabilistic Machine Learning, Web Client Languages.
  - **Awards:** Provost Honors
  - **Extracurriculars:** Data Science Student Society, Ski & Snowboard Team, Alpha Epsilon Pi Philanthropy Chair

## EXPERIENCE

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- **Art of Problem Solving** San Diego, CA  
*Software Engineering Intern* *June 21th 2023 - August 12th 2023*
  - **Tools:** Javascript, SQL(Postgres), HTML/CSS, Git, React, Node
  - Collaborated on an 11 person software engineering team, specializing in **Git, JavaScript**, and **React**
  - Engineered internal infrastructure for automated conversion of web content into printable formats, enhancing educational resources for numerous schools.
  - Conducted a comprehensive exploration into integrating OpenAI API for custom markup language translation.
- **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

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- **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

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- **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