

# Yousef Helal

(617) 820-2585 | [yousefh@stanford.edu](mailto:yousefh@stanford.edu) | [linkedin.com/in/yousef-helal](https://www.linkedin.com/in/yousef-helal) | [www.yousefh.org](http://www.yousefh.org)

## EDUCATION

---

**Stanford University** Stanford, CA  
*M.S., Electrical Engineering* *Graduation Date: June 2026*

**University of California, Berkeley** Berkeley, CA  
*B.S., Electrical Engineering and Computer Sciences — GPA: 4.00/4.00* *Aug. 2021 – Dec. 2023*

**Coursework** *Artificial Intelligence, Database Systems, Robotics, Embedded Systems, Signals and Systems, Digital Design and Integrated Circuits, Computer Security, Data Structures, Circuit Analysis, Computer Architecture, Quantum Computing, Operating Systems*

**Honors & Awards** *Outstanding GSI Award (Top 10% of GSIs),  
EECS outstanding TA Award (Top 7 TAs in the EECS department),  
HKN (EECS Honors Society),  
Dean's List (Top 10% GPA)*

## PROFESSIONAL EXPERIENCE

---

**Systems Engineering Intern** May. 2023 – Aug. 2023  
*AMD* *San Jose, CA*

- Designed and validated IP functionality for the Microblaze V, a cutting-edge RISC-V based soft processor, utilizing the Vivado and Vitis development tools.
- Spearheaded preparations for the early-access release of Microblaze V to five high-profile customers, including Amazon AWS and Bosch, by creating example designs covering a broad range of industry applications.

**Software Engineering Intern** May. 2022 – Aug. 2022  
*Cloudera* *Santa Clara, CA*

- Automated the installation of Istio into Cloudera's release pipeline, enabling enhanced monitoring and performance analysis of application network activity.
- Developed real-time dashboards to visualize high-volume metrics (1000s of requests per second), accelerating diagnostic and troubleshooting workflows.

**Head Teaching Assistant / Teaching Assistant** Aug. 2022 – Present  
*University of California, Berkeley* *Berkeley, CA*

- Instructed 150+ students each semester in EE120 (Signals and Systems), conducting discussion sections, office hours, etc. Directed a team of 5 TAs as a Head TA and handled administrative duties related to the course.
- Awarded the "Outstanding GSI" and "EECS Outstanding TA" awards for my work.
- Published and presented paper on the innovative teaching methods we employed in [ISCAS 2024](#).

**Research Assistant** Jan. 2022 – Present  
*UC Berkeley Skylab* *Berkeley, CA*

- Pioneered the development of Spatialyze, the first end-to-end geospatially optimized Video Database Management System (VDBMS), under the guidance of Prof. Alvin Cheung. Published in [VLDB 2024](#).
- Leveraged road network data to enhance query execution speeds by up to 100%, and engineered advanced video querying methods integrated with spatial data.

## SELECTED PROJECTS

---

### Five Pillars Cemetery Website

- Designed and implemented a website for Five Pillars Cemetery, the local Muslim cemetery supporting most of the Bay Area, processing data for 2950+ graves.
- Created pages including a map to find buried loved ones, cemetery visiting etiquette, etc.
- Presented website to 3 local masjid communities with 15,000+ members across all of them

## TECHNICAL SKILLS

---

**Programming Languages:** Python, C++/C, Java, Go, JavaScript, HTML, CSS, SQL, Flutter/Dart, Assembly  
**Software Tools:** ROS, Kubernetes, React, Next.js, Git, NumPy, OpenCV, Firebase, Grafana/Prometheus, Istio, Linux  
**Hardware Tools:** FPGAs, Verilog, Vivado, Vitis, RISC-V, Microblaze