

Yousef Helal

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EDUCATION

Stanford University

Stanford, CA

M.S, Electrical Engineering - GPA: 4.00/4.00

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 – Dec. 2023

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 – Dec. 2023

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