Yousef Helal

www.yousefh.org

yousefh@berkeley.edu
(617) 820-2585

Education

University of California, Berkeley — Berkeley, CA
Senior, B.S. Electrical Engineering and Computer Science — *Graduating Fall (December) 2023*

- **GPA**: 4.00/4.00
- **Honors**: Outstanding GSI Award, EECS Outstanding TA Award, HKN (EECS Honors Society), Deans List

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

Experience

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

- Developed designs and validated IP functionality for a brand-new upcoming RISC-V based soft processor.
- Prepared product for early-access release to 5 customers, including Amazon AWS and Bosch

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

- Facilitated and automated the instillation of Istio into Cloudera's release pipeline, allowing engineers to gather metrics about the network activity of applications in the pipeline.
- Constructed dashboards that visualized the metrics gathered, allowing for quick visualization of the 1000's of requests/sec that came in and out of the pipeline.

UC Berkeley EECS — Berkeley, CA
Head Teaching Assistant — *Aug. 2022 – Present*

- Taught ~150 students every semester in EE 120 (Signals and Systems), running discussion sections, office hours, etc.
- Directed the course staff team as a Head TA and handled administrative duties related to the course. Awarded the "Outstanding GSI" and "EECS Outstanding TA" awards for my work.

UC Berkeley SkyLab — Berkeley, CA
Research Assistant — *Jan. 2022 - Present*

- Developing the first end-to-end geospatially optmizied VDMBS: Spatialyze, under Prof. Alvin Cheung's research team.
- Utilized road network data to optimize query execution times by up to 100%, and designed/implemented methods for querying videos using the road network.

Selected Projects

All Chess — *Nov. 2020*

- Designed and implemented a Python-based discord bot that sets up chess games of different types, provides user rankings, and more.
- Won 2nd place @ IEEE Berkeley OpenHacks, and is currently supporting over 110 servers (with 20,000+ members in between all of them).

Techincal Skills

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