

Yusuf Morsi

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Python, C++, Java, C

EDUCATION

University of California, San Diego, Bachelor's of Science

- **Electrical Engineering B.S.** (Oct. 2020 - June 2024)
 - Depth in **Machine Learning and Controls**
- **Relevant Coursework:** Rapid Python Design, Engineering Prob. and Stats, Accelerated C Programming, Advanced Data Structures (Audited), Computer Organization, Digital Systems, Calc 1-4, Analysis of Circuits and Systems, Linear Systems

University of California, San Diego Extension, Certifications

- **Front-End Web Development Certification** (Jan. 2020 - Sep. 2020)
- **iOS Programming Certification** (Jan. 2019 - May 2019)

WORK EXPERIENCE

Research Intern, UCSD Mobile Systems Design Lab (Dr. Sujit Dey)

May 2022 – Sep. 2022

- Will focus on the R&D of **iOS** and **Android** apps that enable engagement between an ML platform, patients, and physicians.

Software Engineer Intern, Project YELLOW

Oct. 2021 – Present

- Developing an exclusive social platform where people are only able to add people that they meet in real life by **scanning an NFC chip**
- Developing cross-platform app with **Java**, **React-Native**, **Swift**, and **Firebase**. Also created site with **HTML**, **CSS**, and **JavaScript**.

Undergraduate Researcher, UCSD DigiHealth Lab (Dr. Edward Wang)

April 2021 – Present

- DigiHealth is a joint research laboratory of UCSD Design Lab and the Jacobs School of Engineering ECE department.
- Working under the guidance of Dr. Edward Wang and his Ph.D. students to develop a **deep learning model** with **MobileNetV2** for pupil locating and measuring.
 - Have written **C++** code for **I2C communication**, **designed circuits** on Eagle, and **soldered** them.

Mathematics Instructor, Mathnasium

May 2021 – April 2022

- Instructed over 100 K-12 students in mathematics.

PROJECTS

CarbonVista: Vehicle Carbon Footprint Calculator (HTML, CSS, JavaScript)

April 2022

- Our [website](#) calculates how many pounds of CO2 the user's vehicle emits per day using a formula implemented with JavaScript
- I organized the project plan, assigned tasks, and oversaw the completion of tasks by my 4 teammates.

Drowsiness Detection with Python (OpenCV), Arduino, LaTeX

Feb. 2021 – March 2021

- In this [project](#), a colleague and I programmed software that detects when the user becomes drowsy and starts to close their eyes before alerting them with a buzzing noise until they open their eyes again.
 - My work includes writing **Python** code that detects eye movement, and writing/editing a report on the project using **LaTeX**.

HC-SR04 Ultrasonic Security Sensor with MATLAB, Arduino, Eagle, Fritzing

Nov. 2020 – Dec. 2020

- Two other ECE students and I used MATLAB, an Arduino MEGA, LEDs, a buzzer, an IR remote and receiver, and a DHT11 temperature sensor to create a [security device](#). This device not only detects movement, but also determines whether it's caused by a living being.
 - I wrote code for the **Arduino/C++ code**, the **Eagle** file, and created the **Fritzing** file for this project.

LEADERSHIP / AWARDS

- **Winner of SD Hacks Civic Engagement Category**, April 2022
 - Won first place in category out of 30 teams in a hackathon at UCSD by working with three colleagues to develop a [site](#) that matches student organizations with sponsors using **HTML**, **CSS**, and **JavaScript**.
- **CS Foreach Early Start Mentor** (2021 – Present)
 - Working with other UCSD students to teach a high school student how to create a website with **HTML**, **CSS**, and **JS**.
- **UCSD ECE Undergrad Student Council Mentor** (2021 – Present)
 - I meet weekly with first-year ECE students at UCSD to advise them and answer their questions about ECE, classes, and more.
 - Two of my mentees used my advice to land internships for the summer of 2022
- **Student of Distinction / Student Spotlight**, *UCSD Extension*, July 2020
 - After scoring at the top of my class in my UCSD Extension certification, an [article](#) was written about me.
- **Scholarship for Electrical Engineering**, *ACE Mentor Program*, May 2020
- **Scholarship for Electrical Engineering**, *ACE Mentor Program*, May 2019
- **President** of high school's **Architecture, Construction, and Engineering Club** in senior year (Member: 2016 – 2020)

MORE INFORMATION

- Fluent in both English and Arabic
- Holds **MATLAB OnRamp** and **Project Management** certifications
- Experience with **machine learning**, **web and app development**, LTSpice, Eagle, Vivado, Fritzing, Multisim