

# Yusuf Morsi

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Python, C++, Java, C

## EDUCATION

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### University of California, San Diego

- **Electrical Engineering B.S.** (Oct. 2020 - June 2024)
  - Depth in **Machine Learning and Controls**
  - Minor in **Business**
- **Relevant Coursework:** Rapid Python Design; Probability and Stats; C Programming; Computer Organization; Digital Systems; Linear & Nonlinear Optimization; Linear Control System Theory; Python for Data Analysis; Race, Gender, and Computing

### UC San Diego Extended Studies

- **Business Management Certification** (May 2021)
- **Front-End Web Development Certification** (Sep. 2020)
- **iOS Programming Certification** (May 2019)

## WORK EXPERIENCE

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### Machine Learning Intern, Advanced AI Solutions

Sep. 2022 – Dec. 2022

- Developing fire detection and thermal imaging software for autonomous firefighting drones.
  - Using **Python (TensorFlow, Keras)**, **CNNs**

### Software Engineer Intern, CarsXE API

June 2022 – Sep. 2022

- Focusing on **full-stack web development** and license plate recognition.
  - Using **HTML**, **CSS**, **Node.js**, **JSON**, **Python (OpenCV, TensorFlow, Keras)**

### Software Engineer Intern, UCSD Mobile Systems Design Lab (Dr. Sujit Dey)

June 2022 – Sep. 2022

- Focusing on R&D of **iOS**, **Android** apps that enable engagement between ML blood pressure platform, patients, and physicians.
  - Recipient of Summer Research Internship Program
  - Using **Swift**, **Java**, **JavaScript (Axios)**, **JSON**

### Software Engineer Intern, Project YELLOW

Oct. 2021 – June 2022

- Developed a social platform where people are only able to add people that they meet in real life by **scanning an NFC chip**
  - Used **Java**, **React-Native**, **Swift**, and **Firebase**.

### Research Intern, UCSD DigiHealth Lab (Dr. Edward Wang)

April 2021 – May 2022

- Wrote **C++** code for **I2C communication**, **designed circuit schematics** on Eagle, and **soldered** them.

## PROJECTS

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### Drowsiness Detection: A Hardware and Software Approach

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 (with **Arduino**) until they open their eyes again.
  - My work includes writing **Python (OpenCV)** eye movement detection code and writing a report with **LaTeX**.

### HC-SR04 Ultrasonic Security Sensor

Nov. 2020 – Dec. 2020

- Our group used created a security device that detects movement and determines whether it's caused by a living being.
  - I wrote **Arduino/C++** and **MATLAB** code, worked on the **Eagle** file, and created the **Fritzing** file for this project.

## LEADERSHIP / AWARDS

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- **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**. I designed the UI/UX.
- **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** (Oct. 2021 – Present)
  - I meet weekly with first-year ECE students at UCSD to advise them and answer their questions about ECE/ML.
  - Two of my mentees used my advice to land internships for the summer of 2022
- **Student of Distinction / Student Spotlight**, UCSD Extended Studies, July 2020
- **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: 2016-20)

## MORE INFORMATION

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- Fluent in both English and Arabic
- Certified in Project Management
- Experience with **machine learning**, **web and app development**, LTspice, Eagle, Vivado, Fritzing, Multisim