

Yusuf Morsi

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<https://github.com/ymorsi7>

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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:** Engineering Prob. and Stats, Accelerated C Programming, Rapid Python Design, 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)

June 2022 – Sep. 2022

- Will focus on the research and development of an iOS application that enables 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**. I joined this startup for the opportunity to work with NFC chips and mobile app dev. I've also created their new site with **HTML**, **CSS**, and **JavaScript**.
 - Developing cross-platform app with **Java**, **React-Native**, and **Firebase**.

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

AI Yusuf Discord Bot with Python (PyTorch)

Nov. 2021 – Present

- Used **PyTorch** to interpret conversation transcripts and build a chatbot using them. The chatbot will input and output messages to Discord.
- With **Python**, I created a separate Discord bot that sorts through conversations in a server that I'm active in and generates transcripts.
- ML code has been created. The project is currently in the data collection phase. When complete, the AI Discord bot will be deployed.

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 worked on **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.
- **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 in **machine learning**, **web and app development**, LTspice, Eagle, Vivado, Fritzing, Multisim