

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 and Computer Engineering B.S.** (Oct. 2020 - June 2024)
 - Depth in **Machine Learning and Controls**
 - **Minor in Mathematics**
- **Relevant Coursework:** CSE11/ECE15 (*Accelerated Java and C*), ECE17 (*OOP w/ C++*), ECE16 (*Rapid Python/OpenCV Design*), ECE30 (*Computer Organization*), ECE109 (*Probability Theory*), MATH20A-D (*Calculus 1-4*), ECE25 (*Digital Electronics*), ECE35/45 (*Circuit Analysis*)

University of California, San Diego Extension, Certifications

- **Android Programming Certification** (Sep. 2021 - June 2022)
- **Front-End Web Development Certification** (Jan. 2020 - Sep. 2020)
- **iOS Programming Certification** (Jan. 2019 - May 2019)

WORK EXPERIENCE

Software Engineer Intern, Project YELLOW

Oct. 2021 – Present

- Developing exclusive social platform where people are only able to add people that they meet in real life by **scanning an NFC chip**. I decided to join this startup for the opportunity to work with NFC chips and mobile app dev. I've also created their new site with **HTML, CSS, JS**.
 - Developing cross-platform app with **Java, React-Native, and Firebase**.

Undergraduate Researcher, UCSD DigiHealth Lab

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** and for pupil locating and measuring.
 - Have written **C++** code for **I2C communication**, **designed circuits** on Eagle, and **soldered** them.

Researcher, Young Engineer Experience, SDSU Experimental Mechanics Lab

June 2019 – July 2019

- Under the guidance of Dr. George Youssef, I **researched** the tensile strength of 3D printed ABS ASTM D638 samples versus ASTM D638 samples created with injection molding.

Mathematics Instructor, Mathnasium

May 2021 – Present

- I instruct K-12 students in mathematics.

PROJECTS

AI Yusuf Discord Bot with Python (PyTorch)

Nov. 2021 – Present

- Used **PyTorch** to interpret transcripts of conversations 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

- **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.
- **AP Scholar, College Board**, July 2020
- **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.
- **President** of high school's **Architecture, Construction, and Engineering Club** in senior year (**Member**: 2016 – 2020)
- **Scholarship for Electrical Engineering**, ACE Mentor Program, May 2020
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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