Yusuf Morsi

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https://github.com/ymorsi7
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Python, C++, Java, C

EDUCATION

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

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 machine learning for car data.
  - Using **HTML**, **CSS**, **JavaScript**, **JSON, Python**

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 Reserach Internship Program
  - Using **Swift**, **Java**, **JavaScript (Axios)**, **JSON**

Software Engineer Intern, Project YLLOW — *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 circuits** on Eagle, and **soldered** them.

PROJECTS

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

- **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** (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

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