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:*** *Robotics & Machine Intelligence; Pattern Recognition & ML; Deep Learning w/ Applications; Linear/Nonlinear Optimization w/ Applications; Control System Theory; Python for Data Analysis; Rapid Python Design; Computer Organization; Digital Systems; C/C+ Programming; Adv. Data Structures; Algorithms; Race, Gender, & 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 – Present*

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

Software Engineer Intern, CarsXE API *June 2022 – Present*

- Assisting in full-stack web development (**HTML/CSS**, **Vue.js)**, and leading intern license plate recognition software implementation [**Python (TensorFlow, YOLOv4, OpenCV, Tesseract OCR)**]

Software Engineer Intern, UCSD Mobile Systems Design Lab (Dr. Sujit Dey) *June 2022 – Sep. 2022*

- Assisted in the development of iOS (**Swift**), Android (**Java, Retrofit, JavaScript (Axios)**) apps that enable engagement between ML blood pressure platform, patients, and physicians.
  - Recipient of UCSD Summer Research Internship Program

Software Engineer Intern, Project YLLOW *Oct. 2021 – June 2022*

- Strengthened internet safety by assisting in the designing and developing of an iOS social platform with restricted access by utilizing NFC chips to only allow adding real-life acquaintances (**Swift and Firebase**).

Research Intern, UCSD DigiHealth Lab (Dr. Edward Wang) *April 2021 – May 2022*

- Developed I2C communication code with **C++**, utilized **Eagle** to design circuit schematics, and soldered in a laboratory setting.

PROJECTS

Drowsiness Detection with OpenCV and MATLAB *March 2021*

- Increased student productivity by partnering with a colleague to program software to provide a buzzing alert when detecting user drowsiness and eye closing.
  - Used **Python (OpenCV)** to write eye movement detection code, **MATLAB** for hardware, and **LaTeX** for paper.

HC-SR04 Ultrasonic Security Sensor *Dec. 2020*

- Tackled security vulnerabilities by teaming with peers to use movement to identify living beings for a security device.
  - Wrote **Arduino/C++** and **MATLAB** code, contributed to **Eagle** file, and prepared **Fritzing** file for on-time delivery.

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.
    - Designed and developed the UI/UX with **HTML/CSS, JS**.
- **CS Foreach Early Start Mentor** (Oct. 2021 – *Present*)
  - Working with other UCSD students to teach a high school student how to create a website with **HTML/CSS, 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 2019, June 2020)

MORE INFORMATION

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