

Yusuf Morsi

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Python, C++, JavaScript, MATLAB

EDUCATION

University of California, San Diego

- **Electrical Engineering B.S.** (Oct. 2020 - Dec. 2023)
 - Depth in **Machine Learning and Controls**
- **Relevant Coursework:** Linear/Nonlinear Optimization; Control Theory; Rapid Python Design; Computer Org.; Digital Systems; C Programming; Python Data Analysis; Race, Gender, & Computing; Circuits and Systems; Deep Learning w/ Applications; Intelligent Systems & Robotics (ML); Pattern Recognition & Machine Learning; Product Engineering I, II (WI-SP23);

UC San Diego Extended Studies

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

WORK EXPERIENCE

Software Engineer Intern, CarsXE API

June 2022 – Present

- Assisting in full-stack web development (**Vue/Nuxt.js, Next.js, Sentry.io**)
- Leading intern license plate recognition software implementation [**Python (TensorFlow, YOLOv4, OpenCV, Tesseract OCR)**]
- Developing **pip package** for company API

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 YELLOW

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

Hate Speech NLP Analysis

Dec. 2022

- Tackled online hate speech by utilizing NLP methods to detect and analyze hate speech on a new streaming platform
 - Wrote **Python** code for **TF-IDF vectorization** and a **decision tree** hate speech detection model for on-time delivery.

Drowsiness Detection with OpenCV and Arduino

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, **Arduino** for hardware, and **LaTeX** for paper.

LEADERSHIP / AWARDS

- **IEEE Technical Chair** (Oct. 2022 – Present)
 - Responsible for organizing technical workshops and events for the second-largest IEEE student branch in the US.
 - Attended IEEE Rising Stars conference (2023) in Las Vegas, NV
- **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.
- **CS Foreach: CS Team Lead** (Oct. 2021 – Present)
 - Leading other UCSD students to teach a high school student how to create a full-stack site with **HTML/CSS**, and **JS**.
- **Eta Kappa Nu (HKN): CSE Outreach** (Mar. 2022 – Dec. 2022)
 - Visited inner-city San Diego schools to teach K-12 students computer science and engineering fundamentals.
- **UCSD ECE Undergrad Student Council Mentor** (Oct. 2021 – Dec. 2022)
 - Met weekly with first-year ECE students at UCSD to advise them and answer their questions about ECE/ML.
- **Student of Distinction / Student Spotlight, UCSD Extended Studies** (July 2020)
- **Scholarship for Electrical Engineering, ACE Mentor Program** (2019, 2020)
- **Winner of FRC (First Robotics Competition) San Diego Regional** (2017)
 - Ranked 14 out of 66 teams in San Diego regionals and proceeded to world championship in Houston, TX.

MORE INFORMATION

- Fluent in both English and Arabic
- Experienced with **ML, APIs, project management, web/app development, MATLAB, LTspice, Eagle, Vivado**