Yusuf Morsi

Python, C, C++, Java

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EDUCATION

University of California, San Diego, Bachelor's of Science Degree
- *Electrical Engineering B.S. (Oct. 2020 - June 2024)*
  - *Depth in **Machine Learning***
  - *Minor in **Mathematics***
- *Organizations:* ECE Alumni Mentorship Program, IEEE, ECE Undergrad Student Council, CS Foreach, ACM

University of California, San Diego Extension, Certification Programs
- *Android Programming Program Certification (Sep. 2021 - June 2022)*
- *Front-End Web Development Program Certification (Jan. 2020 - Sep. 2020)*
- *iOS Programming Program Certification (Jan. 2019 - May 2019)*

WORK EXPERIENCE

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 Professor Edward Wang and his Ph.D. students to develop a wearable health device that measures certain levels of the wearer, such as blood sugar.
  - Contributions include writing Arduino/C++ code for I2C communication, designing circuits on Eagle, and soldering them.

Software Developer, Project YLLOW   *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 part-time for the opportunity to work with NFC chips and mobile app development.
  - Using Java, Kotlin, and Firebase

Mathematics Instructor, Mathnasium   *May 2021 – Present*
- I instruct elementary, middle, and high school students in areas of mathematics up until Pre-Calculus (~10 hours/week).

Researcher, Young Engineer Experience, SDSU Experimental Mechanics Lab   *June 2019 - July 2019*
- Under the guidance of Professor George Youssef, I researched the tensile strength of 3D printed ABS ASTM D638 samples versus ASTM D638 samples created with injection molding.

PROJECTS

AI Yusuf Discord Bot with PyTorch   *Nov. 2021 – Present*
- Used PyTorch to interpret transcripts of conversations and create a chatbot using them.
- With Python, I created a Discord bot that sorts through conversations in a server that I'm active in and generates transcripts.
- Machine learning code has been created and tested. The project is currently in the data collection phase to maximize accuracy.

Drowsiness Detection with OpenCV and Arduino   *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 the user with a buzzing noise until they open their eyes again.
  - My work includes writing 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, worked on the Eagle file, and created the Fritzing file for this project.

LEADERSHIP / AWARDS

- **CS Foreach Early Start Mentor** (2021 – *Present*)
- **UCSD ECE Undergrad Student Council Mentor** (Member: 2021 – *Present;* Mentor: 2021 – *Present*)
- **IEEE Technical Committee Member - UCSD** (2021 – *Present*)
- **AP Scholar**, *College Board*, July 2020
- **Student of Distinction / Student Spotlight**, *UCSD Extension*, July 2020
- **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
- **Scholarship for Electrical Engineering**, *ACE Mentor Program*, May 2019

MORE INFORMATION

- Speaks Arabic at professional working proficiency
- Holds **MATLAB OnRamp** and **Cybersecurity for Critical Urban Infrastructure** certifications
- Experience in 3D printing, CAD, Eagle, Vivado, Fritzing, Multisim, web and app development, and more