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)
 - o Depth in Machine Learning
 - o 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.
 - o 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.
 - o 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

Al 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.
 - o 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.
 - o 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
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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