Mahmoud Abdelghany

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Education

Suez Canal University   **Sep. 2020 − Present**
Bachelor's Degree in Computer and Control Engineering   *Ismailia*
- Expected Graduation: May 2025
- Cumulative GPA: 3.52/4

Experience

E.Camp Company   **Dec. 2023 − Present**
Part-Time Instructor   *Ismailia*
- Developed C programming materials for beginners, including 15 presentations, 200 exercises, and 15 assignments for a total of 15 sessions.
- Conducted 7 interactive learning sessions, ensuring a supportive environment for over 30 students.
- Mentored 30+ students during assignments, providing individualized guidance and support.

Relative Experience

SCU Racing Team   **Jan. 2024 − Present**
Wiring Committee Head (EVER Challenge)
- Led a team of 6 students in designing and implementing the complete electrical systems for an electrical racing car project, ensuring successful integration and functionality.
- Prepared and delivered a comprehensive curriculum on car powertrains and schematic design across 20 weekly sessions, mentoring over 20 students throughout the year.

IEEE SCU SB   **Oct. 2022 − Mar. 2024**
Technical Member - Embedded Systems Group
- Collaborated with a team of 5 technical members to develop engaging and relevant content for 4 technical sessions, tailored to a student audience of over 200, and contributed to weekly meetings to ensure cohesive and impactful content delivery over the year.
- Mentored students in technical sessions, resulting in higher satisfaction levels.

SCU Racing Team   **Jan. 2022 − Present**
Technical Member - Dashboard Committee (EVER Challenge)
- Designed and developed the racing car dashboard with a team of 5 for the Ever 2022 competition, enhancing knowledge of ECUs, MCUs, and sensors.
- Collaborated in 20+ team meetings, provided regular progress updates, and helped troubleshoot issues, contributing to the successful completion of the project.

Volunteering

Al Rahma Orphanage   **Jan. 2024 − Present**
Community Service Volunteer   *Ismailia*
- Volunteered as a student with the Suez Canal University Community Service Center and led the creation of a battery-powered car project with the children. This project included interactive sessions on the basics of electricity, motors, and Arduino, preparing the children for a competition with other schools and orphanages.

Projects

Smart Safe | *PlatformIO, ESP32-CAM, C++, Firebase*   **Apr. 2023**
- Implemented a smart safe with a camera to monitor contents in real-time via an Android app built using web technologies.
- Monitored temperature and humidity inside the safe, with data stored and retrieved using Firebase RTDB.

Disabled People Fall Detection | *PlatformIO, Arduino Uno WiFi, MIT App Inventor, Firebase*   **July 2023**
- Prototyped a wearable device for disabled individuals with bio-status monitoring, location tracking, and fall detection using gyroscope and accelerometer sensors. It alerts emergency contacts via a custom app.

Smart Home System with ATmega32 | *C, Atmel Studio, AVR DUDE, Proteus*   **Nov. 2022**
- Designed and implemented a Smart Home Automation System using the ATmega32 microcontroller.

Skills

- **C Programming** (Proficient)
- **Python** (Familiar)
- **AVR interfacing** (Proficient)
- **C++** (Intermediate)
- **Proteus** (Proficient)
- **Atmel Studio** (Proficient)
- **RTOS** (Intermediate)
- **ROS1** (Intermediate)
- **Linux** (Intermediate)
- **Platformio** (Intermediate)
- **Git and GitHub** (Intermediate)
- **ESP32** (Proficient)

Languages

- **Arabic:** Mother Tongue
- **English:** Advanced (C1)
- **Japanese:** Beginner