

AHMED MOSTAFA

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EDUCATION

CIC Canadian International College

Nov 2020 – Jun 2025

BE Electronics, and Communications Engineering, GPA: 3.10 / 4.00

- 1st Rank at CIC Scientific Engineering Day 2023
- Founder & Lead of Google Developer Student Club (2022 – 2023)
 - Ranked among Top 50 Globally & Top 20 MENA at Google Solution Challenge.
- Nominated as Huawei Academy Ambassador for two academic years in a row (2022 – 2024)
 - Top University 2022 Award.
- Participated in various student activities such as; IEEE, Radix.

RELATED EXPERIENCE

Smart Systems Trainee – AUC American University in Cairo

Aug 2024 – Sep 2024

Afretec Summer School on Smart Systems

- Embedded Systems module: Gained expertise in optimizing design metrics, processor and design technologies, and modular programming. Developed proficiency in Embedded C, reusable software development, layered architecture, and large-scale project management. Familiarized with COTS concepts, I/O register access, dynamic architecture, and IoT in autonomous vehicles.
- AI and ML module: Developed a deep understanding of smart systems, encompassing AI and ML fundamentals. Mastered machine learning algorithms, including linear/logistic regression, SVMs, and decision trees. Gained expertise in neural networks, including fundamental concepts of deep learning, convolutional neural networks (CNNs), recurrent neural networks (RNNs), and transformers.
- IOT module: Developed expertise in Internet of Things, focusing on sensor integration, data communication protocols, and IoT architecture design, utilizing Raspberry Pi.

SW Testing Trainee – ITI Information Technology Institute

Aug 2024 – Aug 2024

- Acquired a solid foundation in testing principles and the software life cycle. Gained hands-on experience with mobile and API testing (Postman), test case development, and requirement analysis. Introduced to automation and non-functional testing, with a focus on effective test execution and bug reporting.

SW Testing Trainee – Nezam Academy

Feb 2024 – May 2024

- ISTQB-FL, SW testing concepts.
- Practical Testing Bootcamp (Manual Testing, Performance Testing, API Testing).

Embedded Software Instructor – IEEE CIC SB

Feb 2024 – Mar 2024

- C programming, AVR architecture and interfacing (GPIO, Timer, External interrupt, ADC, UART, SPI, I2C), C for Embedded applications, unit testing.

Full Embedded Systems Diploma – Edges For Training

Aug 2023 – Nov 2023

Full Embedded Systems Diploma under supervision of **Engineer Mohamed Tarek**, The Diploma covered the below topics:

- Basic Concepts of Embedded Systems.
- C Programming.
- Data Structures (Linked-List, Stack and Queue).
- AVR Micro-controllers Interfacing (Implement all drivers).
- C For Embedded Applications(Embedded C).
- Real Time OS(RTOS).
- Software Engineering.
- Embedded Tools.
- HW Labs.

Artificial Intelligence Trainee – ITI Information Technology Institute

Sep 2022 – Oct 2022

- Introduction to AI, Probability and Statistics for ML, Linear Algebra & Numerical Optimization for Data Science.
- Python programming, Data Preparation and Exploration, Neural Network & Deep Learning.

Embedded Software Trainee – ITI Information Technology Institute

Jul 2021 – Aug 2021

- C programming, MCU (AVR Architecture and Interfacing), RTOS, Automotive bus technologies, and Software testing fundamentals.

PROFESSIONAL EXPERIENCE

Technical Sales Specialist – NEXT Expand

Jul 2024 – Present

- Led lead generation for software services such as websites, mobile applications, CRM, ERP.
- Collaborated with the software department to tailor sales strategies.
- Consistently exceeded sales targets through strategic outreach and relationship building.

Operations Lead & Business Developer – Genius Minds

Sep 2023 – Nov 2023

- Led ongoing programs and various activities, ensuring alignment with business objectives.
- Efficiently allocated resources, including budgeting, staffing, and equipment, to optimize productivity and project success.
- Developed and executed sales strategies to consistently achieve revenue targets and quotas.
- Negotiated with clients, vendors, and partners to secure favorable terms and agreements.
- Oversaw operations, focusing on child development programs in coding, programming, and robotics.
- Fostered partnerships with schools, educational institutions, and corporate clients.
- Aimed to equip young learners with essential skills for success in a technology-driven society.

TECHNICAL SKILLS

- C programming language.
- Modern C++ programming language.
- Python programming language.
- MCU Interfacing (AVR, PIC and ARM).
- MQTT, UART, SPI, I2C, LIN, and CAN.
- Quick Emulator (QEMU).
- GNU/Linux OS.
- YOCTO, Bitbake.
- Object Oriented Programming (OOP).
- Real-Time Operating Systems (RTOS).
- Basic knowledge of classical AUTOSAR.
- Git, GNU-make, C make, bash, QEMU.
- Model-based Control (MPC).
- Device Drivers.
- GitHub (CI).
- Cloud Computing (Huawei HCIA Certified)

PROJECTS

Deep Learning Model for COVID-19 Prediction – Afretec Summer School at AUC

- Developed an LSTM-based deep learning model using PyTorch to predict COVID-19 cases from historical data, preprocessed and normalized global COVID-19 datasets for improved accuracy.
- Implemented custom Dataset classes, data loaders, and training loops.
- Dataset preprocessing, Model training, Predictive accuracy.

E-commerce Platform Testing – Practical Testing Bootcamp

- Executed functional, usability, and performance testing for a WooCommerce e-commerce site, by design test cases for product catalog, shopping cart, checkout, and user accounts.
- Identified and reported critical bugs, enhancing user experience and system performance.
- Test plan, Test progress report, Test case, Defect report.

Spy Balloon (SpyTorn) – ISEIC 2024

- Using **Raspberry Pi 3 B+** to develop a **Linux Image** for a compact spy balloon for information gathering.
- Device Drivers: IMU, **LoRa** and Servo-Motor.
- Achievements: Nominated as a **finalist** in the International Science and Engineering Innovation Competition (ISEIC) 2024, Egyptian Air Defense College.

Door Locker Security System – Embedded Systems Diploma

- Using **ATmega32** to develop a system to secure a door with digital password.
- Drivers: GPIO, Keypad, LCD, Timer, UART, I2C, EEPROM, Buzzer and DC-Motor.

StopWatch System – Embedded Systems Diploma

- Using **ATmega32** to develop a stopwatch with real-time display on 7-segment displays.
- Drivers: GPIO, Timer, External Interrupts, and 7-Segment display.

Fan Speed Controller based on Temperature Sensor – Embedded Systems Diploma

- Using **ATmega32** to develop a system that adjusts speed based on temperature readings.
- Drivers: GPIO, ADC, PWM, LM35 temperature sensor, LCD, and DC motor.

Mini-Satellite (CanSatero) – ISEIC 2023 & CIC Scientific Engineering Day 2023

- Utilizing **ARM Cortex-M4**, equipped with Iridium Certus™ 9810, sensors like BMP180, HMC5883, and a Rain Sensor.
- Drivers: UART, I2C, ADC.
- Achievements:
 - Ranked among first 20th **finalists** in the International Science and Engineering Innovation Competition (ISEIC) 2023, Egyptian Air Defense College.
 - **1st** Rank at CIC Scientific Engineering Day 2023.

Bootloader – Embedded Systems Diploma (Eng. Ahmed Abd El-Ghafar)

- Customize a Bootloader for STM32F4 microcontrollers, focusing on enhancing firmware upgrade processes, using **UART**, ensuring reliable data transmission and system integrity during firmware updates.

REFERENCES

Salma Subh, PhD

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Mohamed Abdel Azeem, PhD

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