Mohamed Elgazar

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Objective

Mechatronics engineer with a focus on embedded software engineering and a strong technical background inprogramming languages such as C, C++, and Python. I am experienced in working with various microcontrollersand know how to interface with them effectively and I am also familiar with mobile development and web development.

Education

Mansoura University, Bachelor of Mechatronics Engineering   Sept 2020 - Sept 2024

- GPA: 3.4/4.0
- **Coursework:** Mechanics, Classic control, Embedded systems , Robotics , Linear algebra , Statistics , Artificial intelligence

DataCamp, Associate Data Scientist in Python - Career track   Dec 2024 - Apr 2025

- GPA: Completed
- **Coursework:** Python , SQL , Data Manipulation , Machine Learning , Statistics , Data Visualization

DataCamp, Associate Data Analyst in SQL - Career track   Dec 2024 - Apr 2025

- GPA: Completed
- **Coursework:** Python , SQL , Data Manipulation , Data Analysis , Data Visualization , Data Communication

DeepLearning.AI and Stanford University, Advanced Learning Algorithms   Jan 2025 - Mar 2025

- GPA: Completed(Certificate)
- **Coursework:** Neural Networks, TensorFlow, Machine learning , Decision trees , Linear algebra , Statistics , Artificial intelligence

DeepLearning.AI and Stanford University, Supervised Machine Learning: Jan 2025 - Mar 2025
Regression and Classification

- GPA: Completed(Certificate)
- **Coursework:** Python ,Supervised Learning, NumPy , scikit-learn, Machine learning , Gradient Descent

Udacity - Egypt FWD, Embedded Systems Professional Nanodegree   Sept 2022 - Dec 2022

- GPA: Completed(Certificate)
- **Coursework:** Embedded Systems, AUTOSAR , Automotive , Automotive Communication protocols , Agaile , AVR and ARM microcontrollers

Udemy, Mastering RTOS and Embedded Linux | Mobile App Development with Flutter

Experience

Computer Science Instructor, Roboto Academy   Oct 2024 - Present

- Designed and delivered robotics and computer science curricula.
- Taught advanced programming and AI concepts to students.
- Fostered a hands-on learning environment with robotics kits and software tools.

Embedded Software Engineer Intern, Siemens - Eitesal   June 2023 - Jan 2024

- Gained practical experience in microcontroller interfacing and automotive communication protocols.
- Learned AUTOSAR software architecture and MISRA-C standards.
- Developed real-time firmware for ARM and AVR microcontrollers.
- Worked with a team of developers to develop an embedded system project.
- Gained hands-on experience with microcontroller-based systems and Real-Time Operating Systems.

Projects

Advanced Exploration Robot Github

- Developed a pipe exploration robot using the Raspberry Pi.
- Using Python to program the Raspberry Pi to collect data from sensors (Camera, Ultrasonic, etc.).
- Tools used: C++ , Python, Raspberry Pi , NodeJs , STM32 MCU , Linux.

AVR and ARM Drivers Github

- Write drivers code for peripherals such as GPIO, GPT , SPI, I2C, and ADC.
- Developed projects using ARM Cortex-M3 based STM32 microcontrollers.
- Tools Used: C, .C++, STM32CubeMX , XC8 , Segger debugger

Technologies

Languages: C++, C Python, Dart, HTML, CSS, JavaScript, C#,

Technologies: Linux, RTOS, VS code, XCode, ARM, AVR, STM32Cube, Flutter, AUTOSAR, Git, Github