

EDUCATION

- **Cairo University, Faculty of Engineering** Giza, Egypt
Bachelor of Engineering in Communications and Computer; GPA: 3.31 Sep. 2015 – May. 2020

WORK EXPERIENCE

- **APTIV (EJAD BOT program)** Free Zone, Naser City
Embedded Systems Software Engineer Oct 2022 - Present
 - **MPIC (Multi-Purpose Interior Camera)**
part of Daimler's CIVIC "central In-vehicle infotainment computer" project:
 - * Developed a C++ Camera Manager application running in RichOS to communicate with and test the MPIC Camera Driver running in QNX through the hypervisor layer.
 - * Tested the software at the level of SWE.5 "Integration" & SWE.6 "Qualification" testing following the ASPICE model.
 - * Collaborated in implementing HIL for qualification testing between the Imager and the MPIC.
- **Cairo University, Faculty of Engineering** Giza, Egypt
Teaching assistant Oct 2021 - Jun 2022
 - **Programming Techniques course:**
 - * Co-instructed C++ basics and function versus object-oriented programming.
 - * Evaluated students' assignments and quizzes.
 - **Data Structures & Algorithms course:**
 - * Co-instructed data structures representations in storage media and memory allocation.
 - * Co-instructed searching and sorting algorithms.
 - **Advanced Programming Techniques course:**
 - * Co-instructed Programming Techniques in Network and various Media Types (e.g., multithreaded programming, Internet programming).
- **Advansys ESC** Free Zone, Naser City
RPA developer intern Sep 2020 - Mar 2021
 - **Bupa:** Supported in the maintenance of deployed robots using UiPath, Blue Prism, and Automation Anywhere frameworks.

ACADEMIC PROJECTS

- **Lipify - Lip Reading Application, Graduation Project:**
 - Developed a system that can use only lip movements to predict the user's words based on selected categories and using only lip movements.
 - Built a lips recognition module using image processing in Python.
 - Implemented a feature extraction module using DCT and LDA.
- **Arabic Optical Character Recognizer, Pattern Recognition Course:**
 - Built an offline OCR system using TensorFlow, depending only on classical approaches to extract features.
- **FIFA Analyzer, Big Data Course:**
 - Provided meaningful insights and analysis of clubs, age distribution among top valued clubs, and superstars' skills.
 - Built a linear Regression Model using R to predict a player's market value.
 - Built Polynomial and Linear Regression Models using R to predict players' wages.
- **Scrabble Engine, Machine Intelligence Course:**
 - Developed an intelligent agent that plays the Scrabble board game.
 - Integrated and tested the Monte-Carlo Module in the system.
- **EmojiCode, Compilers Course:**
 - Implemented a lexer, parser, and compiler for a language of emojis using Lex and YACC.

ADDITIONAL EXPERIENCE AND AWARDS

- **AUTOSAR MasterClass**

Sprints.ai

Jul 2023 - Sep 2023

- Learned the layered architecture of AUTOSAR and BSW stacks with a deep dive into COMM, Diagnostics, System & OS, Memory, and Wdg stacks.
- Learned about SWC: design, data types, sender/receiver, client/server, and mode/switch interfaces.
- Developed and configured SWC using Sprints Autosar Authoring Tool (SAAT) as a part of the final project “Seat Manager Application”.

- **CURT Cairo University Racing Team**

Cairo University

Sep 2019 - Jun 2020

- Developed a vehicle data logging system with a real-time dashboard alongside a robust failure detection system to enhance safety and performance.
- Developed a communication system between the Raspberry Pi and the main ECU (Hercules RM48) for data exchange using CAN protocol.

- **Embedded Systems Diploma**

Eng. Mohamed Tarek

Jun 2019 - Aug 2019

- Studied Embedded C, AVR Micro-controllers Interfacing, and RTOS.
- Built a door-locking security system using ATmega32.
 - * Implemented a Security System consisting of two ECUs, HMI and control ECU, responsible for interfacing with the user and system operations & control.

- **B1 German Certificate**

Goethe Ins.

- **C1 IELTS Certificate**

IDP Education

PROGRAMMING SKILLS

- **Languages:** Python, R, C++, C, C#, Java, Javascript, PHP, HTML, CSS, JQuery, SQL, VHDL
- **Technologies:** AUTOSAR, GERRIT, GIT, Polarion, JIRA, TensorFlow