

Ahmed Harbi *Software Engineer*

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in [LinkedIn](#) [GitHub](#) [HackerRank](#) [LeetCode](#)

📁 PROFESSIONAL EXPERIENCE

- Valeo, ADAS Algorithm Engineer** [🔗](#) Jul 2022 – present
Cairo, Egypt
- Working as an ADAS Algorithm Engineer
 - Developing and maintaining (Advanced Driving Assistance Systems) software.
 - Reviewing and analyzing system requirements.
 - Designing, implementing, and executing system validation and software integration test cases.
 - Dealing with SIL (simulation environment, and black-box handling for system signals)
 - Working with longitudinal and lateral components end-user features.
 - Working with FunctionalSafety requirements analysis, black-box testing, white-box testing, and performance testing.
 - Developing automation scripts, and functional regression test cases.
- IBM, Artificial Intelligence Analyst Trainee** [🔗](#) Jul 2019 – Jul 2019
Cairo, Egypt
- Passing the IBM Academic Certificate Exam for Artificial Intelligence Analyst 2019 Mastery Award.
 - Building Chatbots using IBM Cloud.
 - Working with IBM Knowledge studio to get insights from PDFs and Word Files.
 - Working with IBM Watson Assistant to increase the intelligence of the chatbots.

🎓 EDUCATION

- B.Sc. in Communication and Electronics Engineering, Faculty of Engineering, Suez Canal University** Sep 2016 – Jul 2021
Ismailia, Egypt
- CGPA 2.24 / 4.00 (*Good*)
 - Coursework: Communication systems, Electronics, Waves, Satellite communication, Networks, and Neural Networks.
 - Graduation Project: Pharmacy Smart System: Designed and implemented a deep learning-based software to detect and recognize handwritten medical prescriptions. (*GPA: 4.00 / 4.00 (A)*)

🧠 SKILLS

Programming Languages

- C / Embedded C
- C++
- MATLAB

Scripting Languages

- Python
- Shell (Bash)
- Makefile

Microcontrollers

- AVR ATmega32
- Raspberry Pi
- Arduino

Software Engineering practices and tools

- Git / Version Control
- Linux / Unix
- Real-Time Operating System
- Software Testing
- Embedded Systems Layered Architecture [APP - HAL - MCAL]

Knowledge

- ADAS Algorithms
- Sensor Fusion
- Kalman Filters
- Self-Driving Cars Algorithms
- Mapping and Localization Algorithms

Simulation and analysis tools

- Simulink
- LabView
- Proteus

📄 CERTIFICATES

ISTQB Certified Tester Foundation Level

[🔗](#)
ISTQB®

Machine Learning Nanodegree

[🔗](#)
Udacity

Mathematics for Machine Learning

[🔗](#)
Imperial College London via Coursera

Embedded Systems - Shape The World

[🔗](#)
The University of Texas at Austin via Edx

Deep Learning Specialization

[🔗](#)
DeepLearning.AI via Coursera

Introduction to Embedded Systems Software & Development Environment

[🔗](#)
University of Colorado via Coursera

Artificial Intelligence Analyst - Mastery Award

[🔗](#)
IBM

PROJECTS

Prescription-HTR, Graduation Project Role

Handwritten text recognition system designed to detect and recognize drug names out of Egyptian medical prescriptions based on CRNN model, trained on IAM English Handwritten Words Dataset, followed by CTC decoding algorithm and a language model for spell correction. (*Python, OpenCV, TensorFlow, Editdistance*).

Jun 2020 – Jul 2021

Morse Code by Arduino

Arduino transmitter which converts English words into Morse Code and then represents it in light and sound form with laser and buzzer, Arduino receives words through serial Bluetooth communication. Designed an android mobile application, and desktop application to communicate with Arduino, also implemented OCR to detect digital or printed English words and then send them to Arduino. (*Python, C++, OpenCV, Pytesseract, PySerial, PyQt*).

Jul 2018 – Aug 2018

ROV Image Processing

Image Processing system designed to detect shapes of triangles and rectangles underwater, detect colors of red, yellow and blue, and OCR model to detect printed tag of a drowned airplane to assist ROV identifying the airplane. (*Python, OpenCV, Pytesseract*).

Jan 2017 – Feb 2017

VOLUNTEERING

NASA Space Apps Cairo, Technical Support Specialist

Aug 2019 – Oct 2019

IEEE Suez Canal University Student Branch, Chairman

Sep 2018 – Sep 2019

MATE Arab Regional ROV Competition, Safety Judge

Feb 2018 – Apr 2019

Fab Lab Ismailia, Makers Hunter

Dec 2017 – Apr 2019

IEEEmadC, Student Ambassador

Aug 2018 – Jan 2019

IBM Digital Nation Africa, Student Ambassador

Jun 2018 – Jan 2019

NASA Space Apps Ismailia, Technical Lead

Aug 2018 – Oct 2018

IEEE Suez Canal University Student Branch, Technical Member

Jun 2017 – Sep 2018

SCU Racing Team, Technical Member

Jul 2017 – Aug 2018

LANGUAGES

Arabic

Native

English

C2 Proficiency Level - EF SET