

IoT Cloud Developer, Embedded Linux, Artificial Intelligence

Dr. Eng. Mohamed Ould-
Elhassen Aoueileyine



Personal Details:

Name: *Mohamed Ould-Elhassen Aoueileyine*
Nationality: *Mauritanian*
Address: *Villa GB82, Residence Riadh02, Hay Cheker, Borj Touil, Tunis, Tunisia*
Marital Status: *Married*
Date of Birth: *31/12/1981*
Telephone: *+216 21062971*
Email: Mohamed.ouldelhassen@supcom.tn,
ould.elhassen@gmail.com

Introduction:

Dr. Eng. Mohamed Ould-ElHassen Aoueileyine received engineering, master and PhD degrees in information and communication technologies from Higher School of Communications of Tunis "SUPCOM".

He is currently consultant and expert in Internet of Things (IoT) technologies, Embedded Linux Programming, LoRa and LPWAN technologies. He carries out many industrial Engineering projects within Telnet as member of Telnet Space Team working on nanosatellite "ChallengeOne", with Tekonsult, UIT, AICTO and AUF as a trainer and adviser.

He is an active member within the Elghazala Innovation Center and Sup'COM. His research activities are mainly concerned with embedded systems, multisensory IoT platform for e-health applications, digital transformation, and wireless technologies.

Education:

- **2014: PHD in ICT**, Higher School of Communications of Tunis (SUPCOM), Carthage University, Tunisia.
 - SUPCOM, Tunisia
 - IMEP Grenoble, France
- **2008: Master's degree** in Telecommunication from Higher School of Communications of Tunis (SUPCOM), Carthage University, Tunisia.
 - SUPCOM, Tunisia
 - COPL, Quebec, Canada
- **2006: Telecommunication engineer** from Higher School of Communications of Tunis (SUPCOM), Carthage University, Tunisia.

Career History:

- **Feb. 2010 to Present: Trainer and Assistant professor**, Faculty of Sciences of Bizerte, Carthage University, Tunisia.
 - IoT
 - TinyML
 - IoT security
 - IoT protocols and ecosystem
 - Embedded Linux
- **Nov. 2020 to Nov. 2021:** IoT and security project Leader with TopTech Tunisia working on IoT solution design and IoT security framework.
 - IoT ecosystem
 - Smart devices and smart Systems
 - Predictive maintenance
 - Security for IoT ecosystem
- **Sept. 2018 to Sept 2020:** IoT Expert with Telnet-Technologies, Tunis, Tunisia.
 - IoT Protocols
 - LoRa for Satellites
 - CAN bus
- **Sept. 2016 to present:** Project leader at Elghazala Innovation Center working on designing IoT devices and ecosystem
 - Embedded Systems
 - 3D printing
 - CNC machine
 - Fablab
- **Sept. 2020 to present** Technical Lead and Co-founder of FSB-FABLAB:
 - Embedded Systems
 - 3D printing
 - CNC machine
 - Fablab
- **May-Jun 2010,** 2G-3G drive test and optimization mission with SFM-Technologies, Tunisia:
 - RF Drive test
 - Network planning and Optimization
 - Reporting
- **2007-2010:** GETWIRELESS
 - 2G and 3G drive test
 - Analog drive test
 - Model calibration
- **2006-2007:** Software developer with EBSYS
 - PLC
 - VB6

Main projects:

- Participate as a member of space-Team in Telnet Holding, building Tunisian first IoT Nanosatellite, my mission consists of designing and developing IoT Payload based on Linux programming and LoRa Technology.

- Embedded Linux
- Yocto
- C programming
- CAN Bus
- Raspberry Pi
- Building IoT public Smart Lightening based on LoRa network with 3S company.
 - LoRa and LoRaWAN
 - Python Programming
 - Embedded Systems
- Building TinyML model allowing Eppileptic seizure prediction.
 - Edge Impulse
 - Machine Learning
 - TensorFlow Lite
 - Raspberry Pi
- Implementation of a cloud solution on AWS platform, and integration of AI (Artificial Intelligence) with AUTOMATIKA - FRANCE.
 - AWS
- Design and Implementation of IoT security Framework with TOPTECH.
 - IoT security
 - IDS
 - Machine Learning
- Participation in 2G, 3G optimization mission in Djibouti, Togo, and Burkina Fasso
 - Drive test using RF chain for 2G and 3G
 - Data analytics
 - Optimization

Certifications:

- IBM IoT Cloud Developer
- IBM Business Process Analyst
- Green Belt Lean Management and Six Sigma
- AWS educator and central point of contact (CPOC) at Faculty of Science of Bizerte

Professional Experiences as a Trainer:

- With International Telecommunication Union "IUT":
 - IoT fundamentals
 - Embedded systems for IoT
- With Francophonie University Agency "AUF":
 - Building IoT devices
 - Embedded Systems for IoT
- With Arabic Information and Communication Technologies Organization "AICTO":
 - 5G and IoT
 - IoT fundamentals
 - Security
- With SFM technologies:
 - 2G and 3G derive test and network optimization

Academic Experiences and Courses:

- Internet of Things
- Machine Learning for predictive maintenance
- TinyML
- Cloud and virtualisation
- Big Data and Analytics
- Embedded Systems
- Embedded Linux
- Electronics
- C programming
- Robotics

Research fields:

- Internet of Things, LoRa Communication
- Artificial intelligence and TinyML
- Embedded Systems

Skills:

- C Programming
- Python programming
- Electronics for IoT
- Robotics and Drones design and building
- Artificial Intelligence
- 3D design and printing
- CNC machine