Ahamad Kansoun

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Profile

Electronics Engineer specialized in embedded systems and IoT, with strong expertise in PCB design, sensor and actuator integration, and firmware development on ESP32 and STM32 platforms. Proven experience in hardware prototyping, real-time system debugging, and implementation of industrial communication protocols (CAN, Modbus, DALI). Able to contribute across the full development lifecycle, from design to deployment, within applied R&D and electronic maintenance environments.

Skills

Embedded Systems: ESP32, STM32, microcontrollers, Arduino, FPGA

Programming: C/C++, Embedded C, Python, MATLAB

Electronics Design: Schematics and PCB design, hardware prototyping, Altium, KiCad, EasyEDA

Communication & Buses: CAN, Modbus, I2C, SPI, DALI, OBD-II

IoT & Connectivity: MQTT, HTTP/HTTPS, TCP/UDP

Control & Energy Systems: Energy system modeling, PID control, multi-energy control (MATLAB/Simulink)

Tools & Simulation: Proteus, Simulink, MATLAB App Designer

Experience

Research Engineer – Electronics and Embedded Systems March 2023 – Present
Université de Picardie Jules Verne (UPJV), Amiens, France

- Design and development of embedded electronic and IoT systems for experimental research platforms
- End-to-end electronic board design: schematics, PCB layout, manufacturing, and validation
- Firmware development on ESP32 for data acquisition, real-time control, and network communication
- Integration of sensors, actuators, and industrial protocols (CAN, Modbus, I2C, SPI)
- Implementation of remote monitoring and control solutions using HTTP/MQTT and MATLAB applications
- Hardware/software debugging, functional testing, and commissioning of operational systems

Electronics Engineer – Hardware Diagnostics and Repair June 2020 – June 2022
A.Electronic, Lebanon

- Diagnostics and repair of electronic boards used in consumer and computing equipment
- Component-level fault analysis (SMD and through-hole)
- Replacement of regulators, capacitors, integrated circuits, and defective components
- Use of oscilloscope, multimeter, hot-air rework station, and digital microscope
- Firmware intervention, BIOS recovery, and embedded system reprogramming

Electronics Instructor Oct. 2018 – June 2020
ITS Institute, Lebanon

- Teaching analog electronics, digital electronics, and communication systems

Education

University of Burgundy Dijon, France
Master's Degree (MSc) in Advanced Electronic Systems Engineering *2022 – 2023*

Lebanese International University (LIU) Beirut, Lebanon
Engineering Degree in Electronics *2015 – 2020*

Languages

French: Fluent — English: Fluent — Arabic: Native