

MOHAMAD ALI DAKDOUK

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PROFESSIONAL SUMMARY

Fresh graduate in Communication Engineering from the Lebanese International University (2026) with hands-on experience in embedded systems, IoT, wireless protocols, and full-stack web development. Built a complete end-to-end IoT solution as a capstone project — covering hardware integration, microcontroller firmware, REST APIs, cloud databases, and real-time web dashboards. Eager to bring technical skills and a builder mindset to an engineering internship or entry-level role in IoT, embedded systems, or software development.

EDUCATION

Bachelor of Science in Communication Engineering

2022 – 2026

Lebanese International University (LIU) — Beirut, Lebanon | Graduated June 2026

Relevant Coursework: Analog & Digital Communications · Signals & Systems · Electromagnetic Waves & Transmission Lines · Microprocessors & Microcontrollers · Communication Networks · Digital Logic I & II · Electric Circuits I & II · Database Systems (SQL) · Web Programming · Probability & Statistics for Engineers

FEATURED PROJECT

IoT-Based Smart Water Meter System

Jan 2025 – Jun 2025

Lebanese International University — Senior Capstone Project | Supervisor: Dr. Mohamad Raad

GitHub: github.com/mohammaddk220/iot-smart-water-meter | **Tech Stack:** ESP32 · Arduino IDE · Node.js · MongoDB · React.js · Wi-Fi / GSM / LoRaWAN

- Designed and built a full end-to-end IoT water monitoring system integrating a water flow sensor and a turbidity sensor with an ESP32 microcontroller to deliver real-time consumption data and water-quality alerts.
- Implemented wireless data transmission over Wi-Fi, GSM, and LoRaWAN protocols, pushing sensor readings to a Node.js REST API backed by a MongoDB database.
- Developed a React.js web dashboard with two access tiers — consumer view (live usage, billing, history) and admin panel (multi-device oversight, anomaly reports) — updating every few seconds via WebSocket.
- Engineered automated billing logic that calculates invoices directly from sensor-measured flow data, eliminating manual meter reads and reducing billing error risk.
- Implemented turbidity spike detection with real-time alert triggers, enabling immediate notification of water quality incidents.
- Validated all modules end-to-end: user registration, sensor data transmission, real-time dashboard refresh, turbidity alerting, and billing accuracy — all test cases passed.
- Documented system architecture, hardware schematic, API design, and test results in a formal engineering report.

TECHNICAL SKILLS

Embedded Systems & IoT: ESP32, Arduino IDE, AVR GCC, Atmel Studio, Microcontrollers, Sensor Integration, Circuit Design

Communication Systems: Analog & Digital Communications, Wi-Fi, GSM, LoRaWAN, Antenna Theory, Signal Processing

Programming Languages: C, C++, JavaScript (Node.js / React.js), Java, Python (Basic), SQL, HTML/CSS, Assembly (Basic), MATLAB / Octave

Back-End & Databases: Node.js, REST APIs, WebSocket, MongoDB, MySQL / SQL, Database Design

Front-End: React.js, HTML, CSS, Responsive Web Design

Simulation & EDA Tools: Proteus ISIS, Multisim, MATLAB, AVR GCC

Other Tools: Git / GitHub, Linux (Basic), Microsoft Office Suite

PROFESSIONAL EXPERIENCE

Owner / Manager

2021 – 2023

DM Tech — Mobile Accessories Wholesale, Beirut, Lebanon

- Launched and operated a wholesale mobile accessories business, managing procurement, inventory, pricing strategy, and customer relationships.
- Developed strong skills in operations management, supplier negotiation, and financial planning in a fast-paced retail environment.

Electronics Technician

2019 – 2021

Aita Maintenance Factory, Lebanon

- Diagnosed and repaired a wide range of consumer and industrial electronic devices, applying circuit analysis and fault-tracing methodologies.
- Assisted in equipment installation, preventive maintenance scheduling, and documentation of repair procedures.

LANGUAGES

Arabic (Native) · **English** (Professional)