

# Fatima Al-Farsi

Dubai, UAE

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## Education

American University of Sharjah

Master of Science in Computer Engineering

Sep 2019 – May 2021 | Sharjah, UAE

GPA: 3.9/4.0

Activities: IEEE Student Branch Chair, IoT Lab Research Assistant, Women in STEM Mentor

Relevant Coursework: Embedded Systems Design, IoT Protocols, FPGA Programming, Real-time Systems, Digital Signal Processing, Computer Architecture, Advanced Microcontrollers

United Arab Emirates University

Bachelor of Engineering in Electrical Engineering

Sep 2015 – Jun 2019 | Al Ain, UAE

GPA: 3.8/4.0

## Work Experience

Embedded Systems Engineer | Siemens | Jun 2021 - Present | Dubai, UAE

- Designed and implemented firmware for industrial IoT devices using C and FreeRTOS.
- Developed communication protocols between embedded devices and cloud infrastructure.
- Optimized power consumption algorithms that extended battery life by 40% in field devices.

IoT Engineer | Etisalat | Jan 2020 - May 2021 | Dubai, UAE

- Implemented secure communication protocols for smart city sensors using MQTT and CoAP.
- Developed edge computing solutions that reduced cloud data transmission by 70%.
- Created testing frameworks for validating embedded system performance and reliability.

## **Skills**

Embedded Systems: ARM, AVR, PIC, ESP32, Arduino, STM32

Firmware Development: C, C++, Embedded C, Assembly, Rust

Operating Systems: FreeRTOS, Zephyr, Embedded Linux, VxWorks

IoT Protocols: MQTT, CoAP, LoRaWAN, BLE, Zigbee, Thread, Modbus

Hardware: PCB Design, Circuit Analysis, FPGA, Digital Signal Processing

Tools: Keil, IAR Embedded Workbench, MPLAB X, Eclipse, PlatformIO

Other: Real-time Systems, Power Management, Security for Embedded Systems, Firmware OTA Updates

## **Certificates**

ARM: Certified Embedded Systems Engineer

IEEE: IoT Solutions Architect

NXP: Professional Embedded Systems Designer

## **Awards**

Innovation Award - Middle East IoT Challenge 2023

Best Paper - IEEE International Conference on Embedded Systems

UAE Smart City Innovation Grant Recipient