

Verena Ashraf Wadea Aziz

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Overview

Entry level Engineer with a deep passion for Embedded and IT. I've been building my skills by taking courses and working on projects. Now, I'm looking for real-world opportunities where I can use what I've learned, get more hands-on experience, and keep learning and improving in both areas.

Education

- **Beni-Suef University**
 - **Faculty of Engineering , Electronics and Communication Department** (2021-2026)
 - **Grade:** Excellent (88%)
 - **Graduation Project:** Case Study and Validation of SILKIT-Integrated In-Vehicle Network Architectures Using Digital Twin Simulation - **Sponsored by Siemens**
 - Developed and validated an AUTOSAR-based Automatic Emergency Braking (AEB) system using digital twin simulation.
 - Integrated CARLA Simulator with Vector SIL Kit for real-time vehicle and sensor communication.
 - Performed software testing, verification, and system validation using CANoe and Vector tools.
 - Built a hardware-in-the-loop demonstration synchronized with the simulation environment.

Courses and training

- **Windows Server Administration - MCSA** [May,2026]
 - Installed and configured Windows Server 2022/2025, Active Directory (AD DS), DNS, and DHCP services.
 - Managed users, groups, organizational units, Group Policies (GPOs), and domain-joined devices.
 - Implemented file server permissions, access control, backup & restore, and system administration best practices.
- **Red Hat System Administration I (RH124) - MaharaTech** [May,2026]
 - Linux Command Line Administration
 - User and Group Management
 - Basic Networking and System Configuration
 - Shell Scripting Fundamentals
- **Mastering Embedded Systems Diploma - Learn In Depth** [Mar, 2026 - Jun,2026]
 - Acquired advanced proficiency in C/Embedded C in depth
 - Data structure for embedded system, creating full projects using linked list & FIFO buffer
 - Build custom Startup.c/Startup.s file, Linker_Script.ld, Makefile utilizing cross tool chain
 - Deep dive and strong understanding for ARM Cortex M3/4 architecture
 - RTOS concepts and real-time system understanding
 - Automotive Communication protocols (CAN ,LIN, Ethernet)
 - STM32Fxxx & ATMEGA32 Drivers from scratch
- **Mastering AUTOSAR Diploma - Learn In Depth** [Jan, 2026 - Mar,2026]
 - Working knowledge of Classic AUTOSAR architecture and methodology (ARXML, UML Diagrams)
 - Experience with AUTOSAR Application Layer development concepts
 - Familiar with COM Stack and ECU communication principles
- **ITI Summer Training - Artificial Intelligence Track** [Aug, 2025]
 - Covered fundamentals of AI including probability, statistics, linear algebra, Python, and data preparation and exploration
 - Introduction to Machine Learning, Neural Networks & Deep Learning, and data science optimization techniques
- **Embedded Systems Diploma by Engineer Mohamed Zaghoul** [Feb, 2025 - Aug, 2025]
 - Covered fundamental concepts of Embedded Systems, including C Programming and Embedded C
 - Strong knowledge of AVR Microcontroller peripherals and implemented all necessary drivers

- **Microsoft Azure Fundamentals Training - Udemy** [Mar,2025]
 - Azure core services and cloud concepts
 - Azure networking and security fundamentals
 - Identity management and resource management basics
- **Ministry of Communications and Information Technology Egypt (MCIT) Internship** [Jul, 2025]
 - Completed a training program focused on foundational topics in computer networks, Data Centers , cybersecurity, and Voice over IP (VoIP) systems
 - Gained practical knowledge in network architecture, protocols, and common cybersecurity threats and introduction to cloud computing
- **Network Administration Track with DEPI** [Jun, 2024 – Oct, 2024]
 - CCNA Routing and Switching (200-301)
 - CCNP Enterprise (350-401 ENCOR)
- **NTI Summer training - Cisco Cyberops Associate** [Aug, 2024]
 - Cyber Security and SOC fundamentals
 - Threat detection and monitoring basics
- **ITI Summer Training – PHP Backend Development Track** [Jul, 2024]
 - HTML, CSS, SQL, PHP

Technical Skills:

- **Programming:** Python, PHP, SQL, C, C++
- **Embedded Communication Protocols:** UART, SPI, I2C, CAN, LIN, Ethernet
- **Software Tools:** Eclipse, VS Code, Keil uVision, STM32CubeIDE / STM32CubeMX, Microchip (Atmel) Studio, MPLAB X IDE, MATLAB / Simulink, Carla Simulator, Altova XMLSpy, Docker, XAMPP
- **Network Administration Tools:** Cisco Packet Tracer, EVE-NG, GNS3, Wireshark, PuTTY, VMware
- **Scripting:** Bash

Projects

- **Traffic Sign Recognition Autonomous Car** [Link](#)
 - Built a smart vehicle system using STM32F401RCT6, ESP32, and Arduino to enable AI-based traffic sign recognition and mobile app control via MQTT.
- **AMAN Hotel Network Design** [Link](#)
 - Designed and configured a secure network for a four-floor hotel. Implemented VLANs, OSPF, HSRP, DHCP, and wireless access points. Security features included ACLs, SSH, AAA, and Port Security.
- **Campus Network Design Project** [Link](#)
 - Designed a campus-wide network topology with multiple buildings. Included IP addressing scheme, inter-VLAN routing, and failover using HSRP.
- **CRUD Web System (PHP & MySQL)** [Link](#)
 - Created a basic web application allowing users to Create, Read, Update, and Delete records from a database using PHP and MySQL.
- **Cloud-Based Web Hosting Project**
 - Deployed a static website on AWS S3 with Cloud Front CDN and configured domain routing via Route 53, demonstrating foundational skills in cloud hosting and architecture.