

Samir Rizk

Embedded Linux Engineer

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PROFILE

Computer Engineer passionate about solving complex problems with innovative programming approaches. Currently working as an Embedded Software Engineer with experience in designing, developing, and maintaining embedded software systems. Highly motivated with strong leadership skills, a keen interest in security, real-time systems, and networking in Linux.

EDUCATION

Embedded Systems 9-Month Program

Information Technology Institute (ITI), Smart Village, Egypt
Graduation Project: RTOS implementation from scratch

Oct 2022 – Jun 2023

B.Sc. in Computer Engineering

Faculty of Engineering, Al-Azhar University, Nasr City, Egypt
Graduation Project: Autonomous Delivery System

Sep 2017 – Jul 2022

EXPERIENCE

Embedded Software Engineer

Valeo, Egypt

2023 – Present

- Developed security features for the Artemis project for Mercedes, with the target ECU developed by Qualcomm. Focus areas included DAC, core dump analysis, SSH, SCP, and Linux security configurations.
 - Feature owner for the Flashing feature in the ConMod project for Volkswagen, where the target ECU was developed by Quectel. Implemented efficient one-click flashing using QFIL in console mode, enhancing flashing speed and reliability.
 - Worked extensively with CANoe, DLT Viewer, GDB, and other embedded development and debugging tools.
 - Gained expertise in system-level development using ADB, vsomeip, Franca, systemd, systemv, udev, sudoers, groups, iptables, and Yocto.
 - Developed automated test cases using Python for validation and verification of embedded systems.
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SKILLS

Programming Languages: C, C++, Python, Java, Bash, Batch Scripting

Tools: Git, Make, CMake, GDB, CANoe, DLT Viewer, Yocto, Systemd, Systemv, ADB

Embedded Systems: Embedded Linux, RTOS, Microcontrollers (ATMEGA32, STM32), Communication Protocols (UART, SPI, I2C, CAN, LIN)

Security Features: Linux Security (udev, sudoers, groups, DAC, iptables), SSH, SCP

Software Development: Data Structures & Algorithms, Debugging, Automation Testing with Python

PROGRAMMING CONTESTS ACTIVITY

- Solved +1200 algorithmic challenges on different online judges.
 - Participated in Al-Azhar Collegiate Programming Contest (2020).
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SOFT SKILLS

- Communication and Leadership
 - Time Management and Teamwork
 - Presentation and Problem-Solving Skills
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LANGUAGES

Arabic: Native

English: B2 - C1 Proficiency

REFERENCES

Available upon request.