

AHMED HASSAN

Embedded Software Engineer

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Sheikh Zayed City, 6th of October, Giza, Egypt.

EDUCATION

SEP, 2016 – AUG, 2021

BACHELOR'S DEGREE, FACULTY OF ENGINEERING, FAYOUM UNIVERSITY, EGYPT.



Bachelor of Computer and Systems Engineering.

Graduation Project: Sightful, Raspberry Pi based glasses device for blind people to help them be more aware about surroundings using AI.

EXPERIENCE

EMBEDDED SOFTWARE ENGINEER, VALEO EGYPT 

SEP, 2021 – PRESENT

- **DVS (Vision System) Development Team – Stellantis (CVADAS) - FOTA Feature Owner**
 - Acted as the feature owner for the FOTA feature. Conducted thorough reviews of customer requirements and actively engaged in discussions with the customer to ensure alignment.
 - Designed and implemented a robust state machine for the FOTA sequence.
 - Ensured the state machine aligned with customer requirements, covering the entire FOTA update process.
 - Developed FTPS (File Transfer Protocol Secure) implementation in C for efficient image transfer.
 - Implemented the FOTA state machine in C to meet customer specifications and applied best practices in embedded software development to achieve reliable and efficient FOTA functionality.
 - Created a CANoe Panel controlled with CAPL Code and Python Script. Utilized the simulated environment to conduct thorough testing of FOTA updates, eliminating the need for the actual FOTA Master and streamlining the testing process.
- **DVS (Vision System) Development Team – Stellantis (CVADAS) - Bootloader Team**
 - Implementation of Boot Manager and Bootloader and ways of validating the application.
 - Hands on experience in configuring AUTOSAR modules with Davinci Configurator.
- **DVS (Vision System) Development Team - BMW (iCAM3 - UCAP) - Bootloader Team**
 - Proficient in handling boot sequences within System-on-Chips (SoCs), particularly with R-CAR from Renesas.
 - Competent in working with Makefiles, linker scripts (GHS/GCC compilers), and startup code.
 - Familiarity with Cybersecurity features related to Boot Loader, encompassing secure booting, debugging, and flashing.
 - Adept at implementing Functional Safety mechanisms.
- **DVS (Vision System) Development Team - BMW (iCAM3 - RFK) - Integration Testing Team**
 - Evaluate system requirements and draft SRS documents through DOORS.
 - Strategize and implement both manual and automated Integration Test Cases.
 - Utilize Vector Tools such as vTESTstudio and CANoe for planning and conducting test cases.
 - Develop Python and Batch Scripts to automate test case procedures.
 - Analyze and resolve bugs reported from different testing stages, including integration, validation, system, and customer testing.
 - Enhance code efficiency by utilizing Klockwork, addressing MISRA violations, and resolving compiler warnings.

JUL, 2022 – PRESENT

- Lead +1K training hours to +140 students.
- Teach students about C and Embedded C Programming, Embedded Systems Concepts, Microcontrollers Interfacing, Communication Protocols, Working with Hardware and Simulators, RTOS.

SKILLS

- C, C++ Programming Languages.
- AUTOSAR Layered Architecture and Device Drivers and using Vector Davinci Configurator.
- FOTA Experience.
- Bootloader Hands on Experience.
- Scripting with Python and Batch Scripts.
- Using Vector tools (CANoe, VTESTstudio).
- Lab Tools such debuggers (Lauterbach) and oscilloscopes.