

Hiring software engineer as easy as calling a taxi.

Ahmed A.

Autosar Diagnostics Engineer

SUMMARY

- For the last 5 years working with different OEMs on different projects
- Mainly specialized in BSW integration and configuration and was diagnostics responsible for several BMW, RSA, and PSA projects.
- Analyzing and resolving classic AUTOSAR BSW issues.
- Providing different customers with AUTOSAR support and coaching.
- Configuring different communication stacks. (CAN, LIN, FlexRay, and Ethernet protocols)
- Integrating Vector's Bootloader, Bootloader Manager, and Bootloader updater.
- AUTOSAR training (Communication, Memory, and Diagnostics stacks).
- Experience with different OEM modules (BMW, DAIMLER, and GM)
- Fluent English
- Basic German
- Available from 25.07.2022

SKILLS

| | |
|---|---|
| Main Technical Skills | AUTOSAR, Diagnostics |
| Programming Languages | C, C#, C++, Java, JavaScript, PHP, Python |
| UI Frameworks, Libraries, and Browsers | CSS, HTML |
| Databases & Management Systems / ORM | SQL |
| Version Control | Git |
| Other Technical Skills | Caneo, CANoe, CAPL, Core ALM, Davinci configurator, DaVinci Developer, Diagnoser, E2 Stu, EB Tresos, ISYSTEM, NXP S32k118, Renesas RH850, Trace32 LauterBach, Tresos, Winidea |

EXPERIENCE

AUTOSAR Software Engineer, WAYS GmbH (external employee in VECTOR Informatic)

July 2019 - Present



Main tasks:

- Providing customers with AUTOSAR support and coaching.
- Analyzing and resolving classic AUTOSAR issues.
- Configuring, integrating, and testing the latest BSW modules released by Vector by creating a StartApplication project to test the SIP before sending it to customers.
- Integrating Vector's Bootloader, Bootloader Manager, and Bootloader updater.
- Configuring different communication stacks. (CAN, LIN, Flexray, and Ethernet protocols)
- Testing Vector SW on different evaluation boards and Customer Hardware with different derivatives. (RH850, Aurix, S32K, SPCxx)

Embedded Software Engineer, Valeo

September 2017 - June 2019

Took a part in the following Projects:

PSA DPE P4P5:

Description: Human-machine interface ECU which was responsible for different functionalities like controlling heat seat, ADAS, and lightning.

Responsibilities:

- Configuring AUTOSAR 4.3 Memory components: Nvm, MemIf and Fee.
- Configuring AUTOSAR 4.0 Communication components: ComM, Com, PduR, CanSM, CanTp and CanIf.
- Configuring AUTOSAR 4.2 MCAL components for NXP S32K118 target: Can and Fls.
- Implementing Network Management according to PSA Non-AUTOSAR requirements.
- Implementing Canoe Simulation.

BMW FZD F40:

Description: Dome module which was responsible for gesture movements to control multimedia, controlling roof, and anti-theft alarm.

Responsibilities:

- Configuring DCM AUTOSAR 4.0 module (Diagnostics Communication Manager) and implementing end-of-line DIDs and routines.
- Integrating and testing standard components like ROMTest, RAMTest, and CPUload.
- Planning and Executing real-time tests.
- Testing Gesture stack (Gateway between Camera on Gesture board to our Mainboard)
- Testing SIREN AUTOSAR Application component.
- Familiar with BMW Tools and tests: E-SYS, EDIABUS, FAT, and ZST.



Freelancer, Bridging the gap between Embedded systems and mobile applications

March 2017 - September 2017

- OBD Sniffing android app to read current data and clear trouble codes.
- Sniffing on a truck SAE J1939 bus to send Speed and RPM data to a server as input for an algorithm to calculate the truck weight while it's moving.
- Real-Time Data "Asset" for UNITY Platform to use ELM327 device to read Speed and RPM data from OBDII port and use them in any project.
- Used TKINTER and PYTHON to implement a GUI on a Raspberry pi to monitor a worker on a machine and show the actual vs the expected target per 8 hours shift.
- Using GSM and RPI to notify specific voice messages according to the SMS sent for Boat Rentals.

Functional Safety Engineer (Intern), BrightSkies Technologies

January 2017 - February 2017

- Applied ISO 26262 functional safety standards on an ADAS project (adaptive cruise control).
- Test cases planning & execution on the ECU using the debugger and automated scripts written in python.

R&D Engineer (Part-time), Ofaly

January 2016 - December 2016

- Newspaper vending machine Al-Masry Al-Youm: A full mechatronic system to automate the newspaper selling process. A newspaper passes out from the machine according to the signals sent from a coin acceptor connected to an ATmega32 microcontroller. Demo Video
- Autonomous boat: Research project in order to drive a boat in the river autonomously using a sensor fusion between Computer Vision and RADAR.
- Fingerprint attendance system: Using finger print module with RPi for submitting attendance and also unlocking company doors.
- Self-service kiosk: ATM machine with coin and cash acceptors for recharging phone credit and using all FAWRY services.



PERSONAL PROJECTS

Autonomous QuadCopter (Graduation project - Grade: A)

June 2016 - June 2017

A completely autonomous flying drone equipped with camera and monitoring sensors that enable obstacle detection and avoidance. The environmental application is the following drone that keeps tracking a specific person using a camera and GPS.

Car Hacking tool for penetration testing

April 2017 - May 2017

Implemented CAN bus sniffing and spoofing tool using OBD tool using ELM327 interfacing tool. (Tested on Opel Astra 2016 and Suzuki SX4 2008)

TECHNICAL TRAININGS

- AUTOSAR Bootcamp (Introduction to most of AUTOSAR Stacks)
- AUTOSAR Application SW
- Diagnostics (UDS Protocol)
- Debugging Embedded Systems
- ROS summer school (Studied ROS (Robotics Operating Systems) at FH Aachen university in Germany for two weeks)

EDUCATION

Vector Academy, Germany

January 2020 - July 2020

Vector CSP-E certified

This course is designed to help engineers working in the field of classic AUTOSAR basic software to develop a deeper understanding of AUTOSAR-related Vector products.

Alexandria University, Egypt

September 2012 - June 2017

B.Sc. in Computer & Communications Engineering

Overall GPA: 3.5 / 4.0 (Excellent)

