Elabbas **Salah**

SOFTWARE ENGINEER

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Summary

software engineer specializing in the automotive industry, my primary focus revolves around integrating and troubleshooting software within Adaptive Autosar environments. This involves ensuring the seamless operation of automotive software systems, particularly for esteemed clients like Mercedes Benz and Stellantis Group. With a deep understanding of automotive software architecture and standards, I address critical bugs and issues to uphold the reliability and safety of vehicle software. Additionally, I provide valuable coaching and support to customers, leveraging my expertise in QNX, Linux, and C++ programming to deliver tailored.

Experience

Adaptive Autosar | PES8 | VECTOR Informatik . Contract

Stuttgart, Germany

SOFTWARE ENGINEER

Apr. 2023 - Present

- Integrating and Deployment of Adaptive MICROSAR into Customer Projects Like Mercedes Benz and STLA Group.
- Consulting and Supporting our Customers in topics concerning architecture, implementation and integration.
- Experienced in Configuration Features in Adaptive MICROSARModules .
- Modeling Features in Adaptive MICROSAR Stacks Like Communication Services, Diagnostics Services and create Adaptive application following Autosar methodology .
- Debugging and troubleshooting all Reported Bugs in Adaptive Microsar including Communications/Diagnostics or related Os Behavior Specially Qnx and Linux system.
- Analyzing Qnx System using momentics and Qnx Command line to understanding system manar.
- Staying on the Cutting edge of technology e.g New Feature in Adptive MICROSAR.
- Participated in Mercedes Projects in multiple Workshops.
- Working in Agile Environments.

Classic Autosar | V-Core | Valeo

Cairo, Egypt

STANDARD SOFTWARE ENGINEER

Oct. 2021 - Apr. 2023

- Responsible for analyzing and implementing software requirements.
- Integrating, Configuring and testing of AUTOSAR stacks (Diagnostic, Communication, Memory, Mode management, Network management).
- Good knowledge in configuration and integration and testing of Autosar Ethernet Stack.
- Understanding of UDS protocol [ISO 14229-1].
- Apply standard software guidelines at components Implementation including MISRA-C rules and Valeo naming rules.
- Good knowledge of AUTOSAR E2E Specially VW E2E.
- Automating the configuration, Testing, and merging different packages using Vector tools or Python scripts.
- A-SPICE L2 deployment.
- Understanding of Agile workflow.

Adaptive Autosar | Geeds | Valeo

Cairo, Egypt

INTERN SOFTWARE ENGINEER

Nov. 2020 - Aug. 2021

- Good knowledge of Adaptive Autosar Workflow (development, integrating, Deployment).
- Understanding of Service-oriented Architecture Concepts.
- Good Knowledge of service UCM sub-module, Centralized service UCM-Master and Fundamental Stack(ara::Com, ara::EXEC).
- Good knowledge of Yocto Project, Qemu, and Posix.
- Good knowledge of Linux commands and OS basic concepts.
- Good knowledge of SOME/IP.

Electronics | MasterTechCo.

Alexandria , Egypt

INTERN ELECTRONICS ENGINEER

JUL. 2020 - Sep. 2020

- Restructured some machine-like CNC, shellers, servers, Cico Centrals, Cico cell phones, and machine drivers
- Trained on how to design relevant circuits for ECUs.
- Implemented power supplies for small and critical control circuits.

Automation | Sprints | Mentorship by Vodafone UK

Cairo , Egypt

INTERN DEVOPS ENGINEER

JUL. 2020 - AUG. 2020

- Trained on new technology to CI/CD.
- Used tools like Docker, Git, Jenkins, and bash scripts.
- Implemented a CI/CD cycle for features on the develop branch in Sprints School Platform.

Projects

IDC Project Mercedes Benz

Stuttgart, Germany

AUTOMOTIVE PROJECT

Nov. 2023 - Present

- Integrating and Testing all IDC Applications to New Adaptive Platform Delivered from Vector.
- Analysing and Adapting all Patches applied over Vector Delivery and fixing any new produced issue.
- Testing all integrating Systems by checking the system behavior for all Variants before and after integration then creating an analysis page with all new features delivered in the last release.
- Debugging and Fixing any Bugs related to adaptive Microsar or applications.
- Supporting customer teams in issue/understanding related to Microsar Adaptive.
- Participated in Multiple Workshops and Debugging sessions with different MB teams.
- Sharing Knowledge for all new features and also Tips and Tricks relating to troubleshooting in Qnx or Adaptive Microsar.

RTCU Project STLA Groups

Stuttgart, Germany

AUTOMOTIVE PROJECT

Apr. 2023, Nov. 2023

- Migrating and Deployment Microsar Project based on TACO CMake to be Compatible with Yocto and creating qemuarm image based on arm32-bit.
- Supporting Customer to create almost Diagnostics services in Adaptive MICROSAR.
- Supporting Customer to Adapting the Modelling and DEXT to be Compatible with new MICROSAR versions.
- Participated in STLA Projects for Multiple Debug sessions related to building or implementing new features or inventing new workarounds to running the system instead of using Execution manager using Linux system.
- Implementing a solution to call Taco CMake through Yocto Recipe to Build Adaptive Microsar.

P2 VW Projects

AUTOMOTIVE PROJECT

Cairo, Egypt

Mar. 2022, Apr. 2023

- Developed E2E Handler to meet VW Requirements Specifications and Tested it.
- Integrate Lin Protocol as Slave and Create whole Simulated system for testing.
- Implemented and Configure Several Diagnostics services and handling with Memory management.
- Implemented Ecu Hard and Soft reset Especially for VM Specifications.
- Implemented General Test cases for the whole system including implemented feature.
- Developed VM Knock-Out Component Feature for ECU and Communication.
- Design the applications and Handlers then integrate them with the whole architecture.
- Integrate my Platform with applications team.

Automated Integration (VALEO MARS)

ARCHITECTURE PROJECT

Cairo, Egypt

May. 2022, Apr. 2023

- Developed automation way called Buttom-UP Approach with Building Units.
- Developed Python scripts to integrate Platform with Specific Components also with Specific OEM Profile as per Manifest Have several input needs, then integrate my automation Scripts to CI and also Unified IDE and Whole Valeo Software Branches used it and that is for the easiest way to make sure that whole integrated feature doesn't have any warning or issues or workarounds also tested as Per OEM Profile, also reduce wasted times of integrating sample Platforms, also the increasing the varieties of Features that could be added without human interfere.

P2 Daimler Project (Artemis)

AUTOMOTIVE PROJECT

Cairo, Egypt

Oct. 2021, Apr. 2023

- Implemented Test Cases for covering all general Requirements for Mbbl Platform.
- Develop General Test Case and Develop ECU Extract Parser tool to extract all info and test against the system configurations.
- Configure several Diagnostics services and Link them to our Handling Component through RTE.
- Configure Network Management to fit MB Requirements Specifications and test it.
- Integrate XCP to The system.

Update And Configuration Management in Adaptive Autosar Platform

GRADUATION PROJECT MENTORSHIP BY VALEO

Cairo, Egypt

Dec. 2021, JUL.2021

- Implemented a system that ensures robust, fail-safe, and secure OTA updates.
- Developed UCM, UCM MASTER, Driver Application, OTA Client, OTA Server, and OTA Website.
- Developed Update And Configuration Management Subordinate Release 19/11 to meet software specifications of Autosar organization Release 20/11.
- Implemented Update And Configuration Management Master as Centralized service over SOME/IP that orchestrates the multiple UCMs in different nodes in a network of vehicles and control update campaign flow to All UCMs Subordinate.
- Implemented OTA Client as an Application in communication with the backend to fetch vehicle packages that needed to update and Polling of an update is available.
- Implemented Driver Application to request a transfer, process, or activation permission from the vehicle driver and Notify the vehicle driver of safety and security measures he has to apply to the vehicle to proceed to the next step into the update campaign.
- Built Image and SDK for Raspberry Pi 3 to Support QT5, SSH,Wifi, and Ethernet that are not compatible with Release 19/11.

Automation Projects

CI/CD PROJECT

Cairo, Egypt

MAY. 2021, AUG.2021

- Implemented Docker and Jenkins files to deploy a simple web Django app on the local host machine as a part of the sprints training.

Skills

Configuration tools	Davinci Developer tool
	Vector Developer tool
	Vector Davinci Configurator Tool
	Vector Davinci Scripting
	Vector Davinci Cmd
Standards	Adaptive AUTOSAR
	Calssic AUTOSAR
	Unified Diagnostic Services (ISO 14229)
Software Tools	momentics qnx
	Docker
	Vector CAnoe
	Gdb
	Autosar XMl Editor
	Vector VTT
	Enterprises Architect
	Doxygen
	Vector Cast
	VSC
	Eclipse
Software Management	gitlab
	jira
	SWf (Mercedes Benz)
	CoreALM "TeamForge"
	Nexus
	Git
	Git Extension
	GitHub
	Conan
Operating Systems	Qnx
	Linux
	Yocto
Programming	C/C++(Modern Cpp)
	OOP
	Bash
	Batch
	CAPEL
	UML
	Groovy
	CMake (TACO)
	Bazel
	Make
	Matlab
Languages	Arabic
	English
	Deutch

Professional Training

PES8 | Vector

SOFTWARE ENGINEER

Stuttgart, Germany
Apr. 2023 - Present

- Qnx.
- Adaptive Autosar.
- Communication Microsar

V-Core | VALEO

SOFTWARE ENGINEER

Cairo, Egypt
Oct. 2021 - Apr. 2023

- AUTOSAR Communication stack.
- AUTOSAR Diagnostics stack.
- AUTOSAR Ethernet Stack.
- AUTOSAR Application Software (RTE).
- AUTOSAR Requirement Management a long softwrare Life cycle
- AUTOSAR Introduction to Adaptive Autosar

Education

Alexandria University of Engineering

B.E. IN ELECTRONICS AND COMMUNICATIONS

Alexandria ,Egypt
Sep. 2016 - Aug. 2021

- Got a Bachelor of electronics and communications engineering program with Good grade