

Software Developer

Work Experience

February 2025 - Present, EBRD - Ministry of Environment: IT Expert

Involved in development of the strategy for Integrated Environmental System (IES):

- Provide support in the design and development of two distinct information systems: SIA MD and SIA REPC, from the ground up;
- Define system requirements for both systems, ensuring alignment with current needs and legal regulations;
- Prepare the Tender Book necessary for the development of SIA MD and SIA REPC;
- Ensure comprehensive support throughout the system development process by actively participating in team meetings, monitoring progress, addressing emerging questions, and providing essential input to facilitate the creation of a high-quality product in the shortest possible time;
- Provide technical support for any requests from the Ministry of Environment and the Environment Agency.

January 2025 - Present, BSW TECH - BlueSys end client: C++ Developer

Involved in development of UI for:

- Developed and maintained user interfaces for embedded products using TouchGFX on STM32F7 MCUs;
- Implemented screen navigation, custom widgets, and animations with minimal memory footprint;
- Optimized framebuffer strategies to achieve 60 FPS on a 720x1280 TFT display;
- Integrated TouchGFX with custom hardware including capacitive touchscreens and external Flash;
- Collaborated with UI/UX designers to translate mockups into functional GUIs;
- Contributed to BSP configuration (STM32CubeMX) and HAL driver integration;
- Documented GUI development process and trained junior engineers on TouchGFX best practices.

March 2023 - December 2024, BSW TECH - Continental end client: Embedded C Developer

Involved in Software Platform package integration for Traveo II projects:

- Working on integration of packages (MCAL, ACG, OS, HSM) and running feature validation tests;
- Analyzing and fixing all configuration errors for MCAL, ACG, OS packages and creating and managing support tickets to relevant suppliers (EB/Cypress/ETAS);
- Integration of plugin patches;
- Update OS plugin configuration to be able to select multiple modules in Tresos with different AUTOSAR version from the same path;
- Add/modify/remove memory sections from .arxml using Autosar Builder;
- Basic configuration of AUTOSAR modules for singlecore and multicore variants using Tresos;
- Alling modules to AUTOSAR 4.1.1/4.1.3 rules;
- Creation of a new environment for FBL and FLU projects;
- Update CMB configuration parameters in .yaml files by creating and managing of: new variants to build/test, categories for automation tests, binary sets for new created variants;
- Analysis and investigation of failed validation tests;
- Updating of module software design in Rhapsody;
- Performing static code analysis compliant with MISRA-2012 specifications using QTools(QAC);
- Working on software component qualification (SWCQ) reports by analyzing risks, test results, requirements and dependencies of a module.

November 2022 - March 2023, BSW TECH - Marquardt end client: Embedded C Developer

Involved in the development of a demo version for an Interactive charging socket:

- Develop a demo software for a charging pannel;
- Configure communication between S32K144 and MLX81143 via MeLiBu protocol;

- Transfer the light control information from master to slaves;
- Exchange diagnostic data from slaves to master;
- Configure auto-addressing sequence;
- Develop animated light systems using RGB LEDs;
- Find and fix HW errors for ICS board;

February 2019 - November 2022, Arobs Transilvania Software - Vitesco end client: Embedded C Developer

Involved in the development of safety mechanism for BSG and DCDC converter projects:

- Working on monitoring functionalities: power-up/power-down shutoff path tests, voltage monitoring, power monitoring, safety error handling, safety input/output interfaces;
- Implementing embedded software for automotive safety discipline (according to ASIL_C and ASIL_D development process) by following the SW Development process (specification, design, coding, debugging, testing);
- Performing the analysis and implementing of change requests by modifying existing SW to adapt it to new hardware or to update interfaces;
- Performing the analysis and fixing of bugs, improve performance and optimize code implementations;
- Debugging and testing the SW (HIL, testbench);
- Reuse and integrate the existing SW by adapting it to specific requirements of the project;
- Creating, modifying or deleting specific unit/component software design diagrams in Enterprise Architect;
- Performing software unitary tests with MC/DC code coverage using RTRtool;
- Performing static code analysis compliant with MISRA-2012 specifications using PC-Lint;
- Preparing quality-related documents for code/design/test reviews and code integration;
- Participation as reviewer at implementation of the concept for shut of path tests, at releasing of requirements and qualification of tests;
- Participation as reviewer at other developers' reviews;
- Creating and managing of Jira issues.

Skills

Technical

- C/C++ embedded language programming skills;
- Good microcontrollers understanding (Hardware/Software);
- ASPICE, AUTOSAR, ISO26262.

Programming languages

Advanced:

- C/C++

Tooling

- Trace32
- Tresos
- INCA
- Control Desk
- Enterprise Architect(UML)/Matlab
- DDS
- IBM Doors
- IMS Integrity Client (MKS)
- Gerrit/GitHub
- Tortoise
- Jira
- Jenkins
- Confluence
- Code Collaborator
- IBM Rational Test Real Time
- PC-Lint(MISRA Compliance)/Qtools
- MeLiBu communication protocol
- Melexis Universal Master

- Mini E-Mlx Debugger
- MlxIDE
- Melexis Interactive Debugger
- Autosar Builder
- Eclipse (TD4/TD5)
- TouchGFX
- STM32CubeMX
- STM32CubeIDE
- STM32CubeProgrammer
- TouchGFX Designer

Languages

- Romanian – native
- English – independent user
- French – basic user
- Russian - proficient user

Education and Training

- 2016 – 2020: Bachelor's degree at Technical University of Moldova, Faculty of Computers, Informatics and Microelectronics, specialty Computers, Chisinau (Moldova)
- October 2018 - January 2019 Embedded Internship at Arobs Software Transilvania (Chisinau)