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## SUMMER INTERNSHIPS

APPLY until The 23<sup>th</sup> of April for your favourite Project at  
lasi@preh.ro

(English CV only!)

### SOFTWARE TESTING

#### SOFTWARE TESTING #1

*Extracting information from automotive ECU based on diagnostics services*

##### Project description

- Create an application using Labview development environment to read static information which will identify the ECU
- The application will be used to identify at the beginning of testing cycle the information existing on ECU
- You will learn about the CAN communication and how the automotive diagnostics are working

##### Your skills

- Basic Labview programming
- Diagnostics services and CAN communication is a plus

#### SOFTWARE TESTING #2

*Develop a logging library for out testing platform*

##### Project description

- Create a library for our internal testing platform using the TTCN3 standard.
- The library will be used to log all CAN signals/messages, hardware signals and internal variables used in testing processing.
- You will learn about CAN communication and TTCN3 standard for testing.

##### Your skills

- Basic programming skills
- TTCN3 and CAN communication is a plus

## SOFTWARE DEVELOPMENT

### SOFTWARE DEVELOPMENT #1

*Metrics generator using DXL scripts*

#### Project description

Create DXL scripts that:

- analyzes information stored in DOORS and generate reports in different formats (as .doc, .xls, DOORS view)
- are configurable and adaptable to different projects (e.g. via GUI)
- extend the default features offered by DOORS tool

#### Your skills

- Programming/scripting skills
- OOP principles understanding
- Database knowledge

### SOFTWARE DEVELOPMENT #2

*SW manager for graphic application using iMX8 processor*

#### Project description

Build a top level SW implemented as a set of services which:

- process the commands received via communication bus (e.g. CAN, UART)
- control the data to be exchanged between processor cores
- control the information to be displayed on the connected LCD

The application shall be easy to maintain and extend with new features.

#### Your skills

- C programming / scripting skills
- Linux knowledge
- Microcontrollers knowledge.

### SOFTWARE DEVELOPMENT #3

*CAN network project specific interface*

#### Project Description

- Simulate the necessary ECUs from the network to represent the communication bus load and provide the appropriate signals to test the ECUs' functionality
- Only a part of the networked communication system will be actually present, communication with the missing bus nodes will have to be emulated
- Additionally, custom scripts will have to be written in order to perform specific tasks ( e.g transmit a specific pattern or profile onto the bus)

#### Your skills

- C, C# programming
- CAN network



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