



MARIUS REBENCIUC

Consulting Engineer Altran UK Ltd
(Ford Dunton PCCN Controls – HiL division)

Contact details

Email: rebenciucmarius@gmail.com

Tel: 07538885856

Professional objective

I seek to continuously develop my skills and myself; thus, I'll be able to provide the best set of solutions to a given engineering challenge. Enthusiastic about the automation of any repetitive task, aiming to use the saved time on implementing new ideas, improving processes and products.. or just enjoying another cup of coffee.

Professional experience

Apr 2014 – present	Consulting Engineer - Powertrain PCCN Controls division - Altran UK Ltd
3 years	UK, Essex Engineering Automotive

Day-by-day activity is focused on providing consultancy services in the "powertrain software validation" field by performing the following tasks:

- execution of HiL specific tests/run automated test packs (engine control SW functionalities testing for different platforms)
- evaluation of results
- identification of software/system flows
- report results to the test management team/ test designer
- work closely with the feature owners and the SW integration team to optimize existing tests or design new ones.

Achievements

Completely automated one process regarding a set of tests previously executed

"manually". The automation consists of minimizing the human operator input during the execution, evaluation and the reporting phase. The process last for approx. 3h and offers a detailed report at the end of the execution. Has the potential to save up to one operator working week time.

Worked closely with our dSPACE support team in order to add new functionalities to their automation testing tool (Automation Desk): ATI Vision interface support in order to stimulate and capture ECU internal parameters. This generated new libraries for the application.

Local responsible for trialing new tools/releases (Matlab, dSPACE products, ATI, python) and automating processes.

Aug 2011 - Apr 2014 Model Based & Embedded Software Development Engineer - SC Continental

2 years, 9 months

Automotive Romania SRL

Iasi - Romania | Engineering | Automotive

Main tasks and responsibilities:

- TargetLink models adjustment (model functionality, dSPACE environment) to fulfill new requirements
- C code generation for the targeted platforms;
- Scripting (.m files);
- MIL and SIL testing using the BTC Embedded Tester or the TPT testing environment;
- Use of Rational DOORS for managing requirements;
- Use of MKS for change management;
- Software design development for new functionalities;
- Embedded C code development following specifications (WinIdea IDE and iC5000 On-chip Analyzer for debugging);
- Software testing (unit, module and integration tests);
- Development and maintenance for the Vector CANoe simulations;
- Internal trainer for Vector CANoe;
- Issuing of documentation for describing process status and work performed on the specified module;

- Performing of integration tests using the available HW (ECUs and loads) interconnected with the virtual CANoe environment through specific peripherals (e.g. CANcase);
- I've also handled software issues fixing and redesigned functionalities for:
 - Behavior of exterior mirrors for vehicles produced by our customer (VAG group): fold-unfold play protection, mirror glass adjustment, mirror heating algorithm, mirror switch selection changing from 4 to 5 position switch;
 - Tweeter functionality (IO Control through diagnostic services). Responsible for implementing a finite state machine algorithm and a speed regulator to support movement requests sent for the actuator, diagnostic for open-load and short circuit to ground detection, hall sensor reading for calculating the actual position and speed.
 - Supply voltage value reading and broadcasting to other modules. Added compensation for voltage drop across a HW component;
- Quality inspection of source files by testing for code coverage, MISRA rules violation and LINT errors.
- Model issues fixing different functionalities:
 - LIN Gateway: removed subsystems (which are already represented by separate models) and corrected design, avoiding the saving/recalling of a wrong position.
 - Window vertical movement and anti-pinch protection existing on E-class cars manufactured by DAG group. Tested, observed behavior, modified model in order to test the new generated code;
 - I've successfully handed-over our project to a new team and offered the support they required during the start-up phase.

Acquired skills/knowledge: Unit Testing, C programming, TargetLink usage, Autosar, Vector canoe, MiL-SiL-PiL Testing, Matlab – Simulink - StateFlow, BT Embedded Tester, TPT Testing.

Jul 2009 - Jan 2010

7 months

QA Manager – SC AVIAROM SA

Iasi, Romania | Quality Control | Transport / Logistics / Import – Export

Job description & tasks:

- Inspection of documents accompanying products and their certificates.
Quality inspection of fuel transported and of the mechanical parts.
- I've created a database for the products on stock, and issued certificates of compliance, documents for fuel shipments required by the country's customs authority and documents for participation in public auction sessions.
- I've ensured compliance with the requirements imposed by the Romanian Civil Aviation Authority regarding the storage and marketing of products for aircraft.
- I trained the involved personnel in terms of compliance with the conditions imposed by the quality management system ISO 9001:2008.
- I've created a database with products available on stock and related documents.
- I've periodically inspected the fuel and oil tanks and worked together with the team responsible for environmental management (ISO 14000).
- I've participated to an online auction sessions
- I've collaborated with a local IT company for developing a project for renewing the company's IT & ITC infrastructure.

05. 2008 – 10.2008

6 months

Sales Representative - IES-IASI ESPRESSO SYSTEM

Iasi, Romania

03.2007 – 05.2008

1 year, 3 months

Commercial Agent / Marketing / Data Entry Operator - SC XLWORLD ROMANIA SRL

Iasi, Romania

07. 2005 – 03.2007

1 year, 3 months

Gardner – ALBEROVIVO

Florence, Italy

09.2004– 06.2005

9 months

Sales Representative – SC TEHNO-ALPHA SRL

Iasi, Romania

04.2001 – 10.2001

6 months

Real estate agent –SC ACASA SRL

Iasi, Romania

Education

2007-2011

**"Gh. Asachi" University Iasi, Faculty of Electrical Engineering
Iasi, Romania**

Bachelor's Degree in Power Electronics and Electric Drives

9.34/10.0 (Bologna) - Equivalent to BEng 1st

BEng Thesis: treated the case of identifying an electrical drive system (control module, power three-phase inverter and three-phase asynchronous electrical motor) and using its characteristics to a better implementation of the control loops. VFD and FOC control methods were used and compared using experimental data.

Thesis marked with 10/10.

Skills

Scripting / coding skills: automation using scripting languages

- **C** : coding, debugging
- **Python**: task automation, GUI, Mexcel/Access data parsing
- **Matlab** scripting: for automating task or post-process logged data
- **Visual Basic**: GUIs and data processing

Matlab - Simulink - State Flow: interested in modelling real systems

Vector tools/applications:

- **CANoe**
- **CANalyzer**
- **CANape**

dSPACE tools/applications:

- **Automation Desk**
- **Control Desk**
- **Synect**

Electronics/electronic circuits design and simulation:

- **Orcad – PSPice**
- **Eagle**

Knowledge & experience with electrical devices (transformers sensors, actuators)

Statistics, prediction in signals analysis

- Used for regression of dependability functions. Scripting done using Matlab

Microsoft Office:

- **Excel (.vba)**
- **Powerpoint**
- **Acces**
- **Outlook**

Good communication skills

Quick learner

Presentation skills (sales representative, trainier)

Hobbies

Photography (Street photography, portraits)

Fitness & nutrition

Personal vehicles fixing (VW Golf , Ford Fiesta LX)

Gardening

Driving license

Category B Full EU (13 years) – Full GB (recently)