europass

# Gabriel Petrișor Selegean

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## WORK EXPERIENCE

09/2022 – CURRENT – Timisoara, Romania
**SOFTWARE DEVELOPER –** ALTEN

Embedded Software Engineer
Technologies used: C/C++, Python

08/2021 – 09/2022 – Timisoara, Romania
**QNX SENIOR SOFTWARE ENGINEER –** LUXOFT

Project: Traton CM4
Role: QNX Software Engineer
Daily tasks:
- Architecture & project planning activities for deliverables to customer
- consultancy activities for project lifecycle in regards to QNX capabilities, planned/unplanned activities
- created secure boot implementation and provided solution for signing IPL and IFS
- build script/makefile changes
- IPL (initial Programm loader) and Startup code changes
- configured network driver application for communication between A35 and M4, and between A35 and NAD (Network Access Device)
- kernel trace for debugging kernel panic
- board bring-up activities

High impact achievements:
- created secure boot implementation and provided solution for signing IPL and IFS
- created build infrastructure and certificate infrastructure for secure boot
- updated QNX SDP from 7.0 to 7.1 for current project

Technologies used QNX, C/C++, makefile, python

Project: Android automotive cluster and infotainment.
Date: 04.2022 - 07.2022
Features developed:
- Telematics implementation
- added telematics application support for real GPS data
- Enabled sound toggle on android automotive back-end

Technologies used: Android (Java&Kotlin), C++, CAN

07/01/2021 – 08/2021 – Timisoara
**SOFTWARE ENGINEER –** VEONEER

**Project:**
HKMC Advanced sensors

**Project related activities:**
Software Architecture for sensors that provide features such as:
- forward collision warning
- forward collision avoidance
- stop & go
- navigation based cruise control
- lane detection

Python scripting development for interpreting system related excel and xml files:
- extracting relevant data about interface ports and signals
- generating reports based on restriction and conditions.

Validate code against architecture

**Technologies used:**
C/C++
Enterprise Architect
Markdown
Python 3.5
- Pandas library
- excel, xml file parsing
- working with collections (lists, dictionaries)

30/04/2021 – 14/06/2021 – Timisoara
### **SOFTWARE ENGINEER –** NEURONY (AS CONTRACTOR)

Implement Automatic Web Certificate management software for EJBCA:

Technologies used:
C++11
REST API
OpenSSL
Linux

28/10/2018 – 07/01/2021
### **MIDDLE SOFTWARE ENGINEER –** RINF TECH

**Projects:**
Main cluster board and rear climate and infotainment board, both
for Jaguar Land Rover.

**Project related activities:**
Board bring up activities
driver development: tilt sensor driver, touch driver
software components development: Power manager, health manger
key performance indicators improvement. e.g. nand cip read/write
speed improvement
integration and configuration of software parts provided by
external software suppliers
hardware activities: interpreting hardware schematics,
oscilloscope measurements
miscellaneous: documenting tasks in RTC and creating
instruction documents for newly added features; synchronizing with other teams
for joint tasks; providing support.

**Technologies used:**
target hardware: NXP IMX8 SoC, with Cordex-A35+Cortex-M4
target operating system: qnx7 for Cortex-A35
main technologies: C/C++
secondary technologies: bash, python, cmake
software versioning tool: IBM Rational Team Concert
IDE's used: QNX Momentics, Visual Studio Code

**Project lifetime span:**
Ian 2019 - 1 Apr 2020

**Projects:**
Imx8 car Cluster with Android Automotive HMI

**Project related activities:**
NXP IMX8 QXP bring-up
Architecture design and implementation of Android Automotive HMI Application

HMI application development
Raspberry pi camera – developed python application that streams camera input to car cluster via ethernet

**Technologies used:**
target hardware: NXP IMX8 SoC, with Cordex-A35+Cortex-M4
target operating system: Android Automotive
technologies used: Java (Android), Python.
Tools used: Android Studio, Visual Studio Code, Segger debugger

**Project lifetime span:**
2020 - 18 Aug 2020

**Projects:**
IQ-MATT robot – automated touchscreen testing

**Project related activities:**
Gesture feature development
Robot assembly and testing for shipment to client
Development & Support for clients
**Technologies used:**
JavaScript, Typescript, Python.
Tools used: Visual Studio Code, Eaggle

**Project lifetime span:**
18 Aug 2020 - 7 Ian 2021

**Address** Timisoara, Romania

20/12/2016 – 27/10/2018
## **SOFTWARE DEVELOPMENT ENGINEER –** NOKIA

**Project**:
*SBTS feature project as part of the sRAN. The challenge is to provide telecom operator clients with latest features, to make headway in reducing operating costs, ensuring high availability and extensive network coverage*
**Daily *tasks:***
- Software maintenance for the component owned by the team I'm part of
- System functionality analysis regarding the bussiness logic of component owned. The analysis is based on syslogs and an internal proprietary tool which allows to see the states of object at different timeframes
- Software fix implementation if a bug or a breach of component's contract is discovered after the analysis
- Feature software development
- Writing unit tests, module tests and pytests to ensure coverage of code, and to filter out possible bugs before commit
- Assuring that the code quality and test coverage excedes the requirements of the process through the official reviews
- Attending to code reviews as part of the code shipment process
- Create diagrams using plantuml for system functionality on the component owned by the team. The code is the documentation, but for core functionality it is necessary to have a plane level sight to speed up the developent and maintenance processes.
- Using jenkins
- Using Jira
- Using CommitMonitor: it enables us to monitor changes through different revisions

Offer guidance to students that are in the process of learning the system overall and the bussiness logic of the component owned by our team
**Technologies used** C++, Gtest, Gmock, pytest, plantuml, SVN, gitlab, Jira, Linux

**Address** Timisoara, Romania

07/07/2015 – 19/12/2016
## **SOFTWARE DEVELOPER –** CONTINENTAL AUTOMOTIVE ROMANIA, TIMISOARA (ROMANIA)

**Project:** Web application to display issue documents stored in a PTC Integrity database
**Daily tasks:**

· Having an agile meeting in the morning with a mentor from Germany to set what needs to be implemented
· Developing Java code for accessing and manipulating database data in regarding to issue documents
· Developing Java Web Servlets paired with HTML+CSS web page for the front-end.
· Working with Tomcat

**Technologies used** Java, Java Web Servlets, HTML, CSS, Eclipse, Tomcat
**Project time span**: July 2015 – March 2016
**Project:** SOA (Service Oriented Architecture) solutions for exchanging documents between Continental and OEM clients
**Daily tasks:**
· Developing SOA web services in Jdeveloper
· Following client specification received from a software architect as part of development process
· Thorough testing to ensure the code works according to the contract (specification document)
· Offer update support for components owned.

**Technologies used:** SOA, Jdeveloper, xml xsd, soapUI
**Project time span**: April 2016 – December 2016

## EDUCATION AND TRAINING

2017 – 2019 – Timișoara, Romania
**MASTER'S DEGREE IN SOFTWARE ENGINEERING –** Master in Software Engineering at "Politehnica" University of Timișoara

**Dissertation thesis:** Predicting stock market price with deep neural networks. In the thesis I describe the process of building and training a tensorflow deep neural network on eur/usd historical data obtained from metaTrader 5. The feed-forward part of the experiment was applied by building an MQL5 expert advisor. The final results were obtained by using the strategy tester provided by MetaTrader5 platform

**Address** Timișoara, Romania

2013 – 2017 – Timisoara, Romania
**BACHELOR DEGREE IN COMPUTER AND SOFTWARE ENGINEERING –** "Politehnica" University of Timişoara Faculty of Automatic Control and Computing

**Bachelor Project:** Android application based on sentiment analysis using convolutional neural networks for online store products reviews. The first part of the project consisting in developing and training a convolutional neural network in Tensorflow. The second part of the project consisting in deploying a pre-trained artificial neural network on android and building an application around it. The application has an online retail store with reviews for products, and has a smart product review functionality which rates a product based on clients reviews sentiment. Moreover the application offers the functionality to display the comments with the highest sentiment and the ones with the lowest sentiment.

**Address** Timisoara, Romania

2008 – 2013
**HIGH SCHOOL DIPLOMA –** Liceul "Mihai Viteazul" Ineu (current Colegiul "Mihai Viteazul" Ineu)

## LANGUAGE SKILLS

Mother tongue(s): **ROMANIAN**

Other language(s):

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---|---|---|---|---|---|
| | Listening | Reading | Spoken production | Spoken interaction | |
| **ENGLISH** | C2 | C2 | C2 | C2 | C2 |

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## DRIVING LICENCE

**Driving Licence:** B

## JOB-RELATED SKILLS

### Job-related skills

Embeded C/C++ experience
Strong object oriented programming in C++11 knowledge
Android Automotive experience:
- Application design & IVI development (Java, Kotlin)
- Android framework (C++) : Bluetooth, CAN

Experienced in using design patterns
A strong understanding of project Requirements, Design
Strong software development knowledge in Java (August 2015 - Present)
Strong C programming language skills gained since High School
Basic Unix and Shell scripting skills gained during University