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WORK EXPERIENCE

08/2021 – CURRENT Timisoara, Romania

SOFTWARE ENGINEER INDEPENDENT CONTRACTOR

Project: Platform development
Activities:

- Bring-up of new platforms
    - implemented cmake toolchain, and build infrastrucrure
    - implemented application for each platform
    - various platforms debug and fixing issues
- Kernel development
    - dts configuration
    - drivers development (video)
- Software architecture

Technologies used: C++17, Android Automotive, Cmake, Jetbrains MPS

25/04/2022 – 25/07/2022 Helmond, Netherlands

ANDROID SOFTWARE ENGINEER LIGHTYEAR

Project: Lightyear car - Android automotive cluster and infotainment.
Features developed:

1. Implemented telematics module for obtaining gps data over can
2. Added telematics support in VHAL (Vehicle Hardware Abstraction Layer)
3. Enabled sound configuration in android automotive back-end
4. For enabling development activities, I've also built the Android Automotive OS, flashing on target, testing & debugging activities

Technologies used: Android (Java&Kotlin), C++17, CAN, Figma

23/08/2021 – 31/08/2022 Timisoara, Romania

QNX SOFTWARE ENGINEER LUXOFT

Project: Traton CM4
Role: QNX Software Engineer

High impact achievements:

1. Created secure boot implementation and provided solution for signing IPL and IFS
2. Created build infrastructure and certificate infrastructure for secure boot
3. Updated QNX SDP from 7.0 to 7.1 for current project

Daily tasks:

1. Architecture & project planning activities for deliverables to customer
2. Consultancy activities for project lifecycle in regards to QNX capabilities, planned/unplanned activities
3. Created secure boot implementation and provided solution for signing IPL and IFS
4. Build script/makefile changes
5. IPL (initial Programm loader) and Startup code changes
6. Configured network driver application for communication between A35 and M4, and between A35 and NAD (Network Access Device)
7. Kernel trace for debugging kernel panic
8. Board bring-up activities

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

07/01/2021 – 24/06/2022 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

Implement Automatic Web Certificate management software for EJBCA:

Technologies used:
C++11
REST API
OpenSSL
Linux

28/10/2018 – 07/01/2021 Timisoara, Romania
MIDDLE SOFTWARE ENGINEER RINF TECH

Projects:
Main cluster board and rear climate and infotainment board, both
for Jaguar Land Rover.
Project related activities:
1. Imx8 SOC familiratization in the first phase of the project
2. Driver development: tilt sensor driver, touch driver
3. Software components development: Power manager, health manger
4. Key performance indicators improvements: reduced startup time substantially
5. Integrated and configuration of software parts provided by external software suppliers
6. Used EB Tresos for changing screen related parameters
7. Used Lauterbach debugger and oscilloscope
8. Validated hardware changes by comparing hw schematic with target board
9. Worked with the team on implementing secure boot solution
10. Used with imx8 SOC documentation and SCFW (system controller firmware) documentation
11. Board bring up activities

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 board bring-up
Building, configuring and flashing Android Automotive OS on target
Architecture design and implementation of Android Automotive HMI Application
Car Cluster HMI application development with the following features:

1. Speed gauge
2. Rev gauge
3. Camera feed via ethernet, incoming from a raspberry pi
4. Tail lights
5. VHAL controll implementation
6. Smooth animation

Technologies used:

1. Android Automotive, Java, C++, Linux, Python, HTML
2. Target board: Imx8 evaluation board + 12" display
3. Aditional hardware + software: Paspberry + camera to provide video feed via ethernet to imx8 targe

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

20/12/2016 – 27/10/2018 Timisoara, Romania
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

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

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.

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

ADDITIONAL INFORMATION

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