



Lucian Vatamanu

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WORK EXPERIENCE

Embedded C Software Engineer

AROBS Transilvania Software [10/08/2019 – Current]

City: Suceava

Country: Romania

Software development:

- Problem Report analysis;
- Bug fixing based on problem report from the system side;
- Creation and making updates on SW documentation;
- Experience with code analysis and fixing coding errors(MISRA and Polyspace);
- HIS Metrics static analysis;
- SW implementation based on design and requirements.

Integration testing:

- Generating stubs and tests using a pluglet test generator (proprietary tool in AUTOSAR Builder);
- Solving existing stubs errors while compiling the project;
- Automatic and manual running of generated tests. Debugging the failed test cases using winIDEA;
- Generating test reports based on specific releases;
- Manual tests verification, test automation, and scripting using Python;
- Ensuring traceability between tests and requirements;
- Converting SWATT FTL tests into Plast for safety components.

Software testing:

ADAS project

- Test Cases automation using Python, based on client's requirements;
- SW qualification testing for requirements;
- Regression testing.

Unit testing:

- create / update test cases with C language to cover code lines/branches using SWATT (proprietary tool for unit test - IDEAS plugin);
- used mock functions, test vectors, and asserts to create test cases;
- analyze test results and report bugs;
- generate reports based on each release.

Software tools:

- IDEAS and APTANA - proprietary IDE based on Eclipse ;
- SWATT - proprietary tool for the Unit test ;
- PLAST - proprietary tool for automatic generation of integration test cases ;
- WinIDEA - Debugging tool;
- DOORS - requirements management tool;
- P4V(Perforce)- project management tool;
- JIRA - issue and progress tracker of the project ;
- AUTOSAR Builder - used to generate tests and stubs for ITS tasks;
- PyCharm -tool for Python, used for branch creation for Git, update test scenarios;

- GitHub.

Hardware tools:

- Vector CanCase;
- IC5000 Debugger;
- Microcontroller boards;
- Power supplies.

Internship project:**Weather station project using EFM32™ Zero Gecko 32-bit Microcontroller (ARM Cortex-M0+ CPU platform).**

Functionalities implemented:

- GPIO configuration ;
- SW debouncing of HW input buttons ;
- Monitoring temperature, humidity, and amount of UV radiation ;
- Outputs activation based on sensors processing ;
- Basic GUI on the integrated display.

Internal AUTOSAR project and training :

- Smart RC car project using NXP S32K144EVB development board for general purpose automotive applications (32-bit Arm® Cortex® -M4F S32K14 MCU);
- Configuration and generation of AUTOSAR basic software modules using EB tresos Studio.

Team Leader

AROBS Transilvania Software [15/01/2022 – Current]

Main activities:

- support with daily topics/tasks blocking points;
- keeping tracking of teammates projects allocation;
- analyzing the extended context in order to offer a high degree of satisfaction to teammates;
- assisting in solving organizational problems;
- helping teammates:
 - with their integration and inside team relations' strength;
 - by creating an easy to follow improvement path with S.M.A.R.T. objectives ;
 - by motivating them to give their best to grow continuously by setting new goals, also by exiting and expanding comfort zone;
- helping the board by performing an once in a while review/evaluation of performance and feedback to and from each teammate.

As a team leader I tried to implement a unique and semi-autonomous strategy with the help of which the company can co-opt the best students from the faculty passionate about our field of activity. This had lots of benefits and good impact on a larger scale. The project was also supported by a S.W.O.T. analysis.

As a team leader I had also participated in an one week internal program called "Rising Stars", within the company. During this, I had trainings and received certifications related to:

- Attitude & Communication;
- Planning & Communication;
- Negotiation & Planning.

Main teacher - "Smart IT"

Smart School After School [20/07/2019 – 20/06/2022]

City: Suceava

Country: Romania

"Smart IT" - Programming for everyone, is a programme made expressly for kids who would like to learn more about the Computer Science.

During Smart IT's lessons kids have learned following:

- to have fun and evolve by creating games with a difficulty grade that made them learn as many new things as possible;
- to develop an analytical way of thinking, which helped them solve problems step by step;
- to acquire basic knowledge related to programming through interactive methods;
- to use the "Hour Of Code" programme;
- to use "Microsoft Office" suite;
- how a computer works (hardware lessons with an disassambled laptop/PC and sw lessons regarding functionality);
- the basis of C++;
- how to create mini games using Scratch(special software for building games using predefined code blocks) and favourite characters through .png images.

Web Development - Learning in free time

[20/09/2021 – Current]

1."The Complete 2022 Web Development Bootcamp" on UDEMY.

The course includes over 65 hours of video lessons + much more practice hours. Throughout this course,which I completed, I was introduced and covered a large amount of tools and technologies, including:

Front-End Web Development:

- HTML 5;
- CSS 3;
- Bootstrap 4 & 5;
- Javascript ES6;
- DOM Manipulation;
- jQuery.

Bash Command Line;

Git, GitHub and Version Control;

Backend Web Development:

- Node.js;
- NPM;
- Express.js;
- EJS;
- REST;
- APIs;
- Databases;
- SQL;
- MongoDB;
- Mongoose;
- Authentication;
- Firebase;
- React.js;
- React Hooks;
- Web Design.

Deployment with GitHub Pages, Heroku and MongoDB Atlas;

Web3 Development on the Internet Computer:

- Blockchain technology;
- Token contract development;
- NFT minting, buying and selling logic.

2.Responsive Web Design - FreeCodeCamp certified course:

The course was the first one that I have completed, and it includes over 300+ hours of lessons and practice. Throughout this course, I was introduced to some of technologies, including:

- Basic HTML and HTML5;
- Basic CSS;

- Applied Visual Design;
- Applied Accessibility;
- Responsive Web Design Principles;
- CSS Flexbox;
- CSS Grid;
- Responsive Web Design Projects.

3.Overview of Scrum Agile project management+common questions+tips to pass PSM scrum org ONLINE Scrum Master Certification.

I wanted to learn something new related to this chapter, as an opportunity arose at some point for someone from our team to take over the position of Scrum Master. However, because none of us had the necessary experience for it, the opportunity was lost.

4. Creating a collection of NFTs on Elrond blockchain.

For this I have used node.js inside hashlips engine, to generate multiple images by combining a variety of .png images. Each one of the NFTs had an unique id and a list of special characteristics.

Link for Elrond blockchain marketplace: <https://xoxno.com/collection/WOLF-9675e2>;

Link for presentation page: <https://lucianvatamanu.github.io/WolvesAgents/>

Certification-Complete Web Development bootcamp:

[ude.my/UC-4aa64b26-a577-4ed1-9391-95932e35714e](https://www.udemy.com/course/complete-web-development-bootcamp/)

Certification-Responsive Web Design:

<https://www.freecodecamp.org/certification/fcc6452f8cb-66f9-4c88-8dd0-7e312d211664/responsive-web-design>

Certification-Overview of Scrum Agile:

[ude.my/UC-e551ddb3-c4eb-47a8-b85c-a5eaacd9cfac](https://www.udemy.com/course/overview-of-scrum-agile/)

EDUCATION AND TRAINING

Bachelor's degree in Computer Science

Universitatea Ștefan cel Mare Suceava, Faculty of Engineering and Computer Science. [01/10/2017 – 15/07/2021]

Address: Suceava (Romania)

Smart Container Tracker - Thesis

Functionalities implemented and components used:

- a barometer(BMP180) to measure the atmospheric pressure at which the module is located;
- a temperature sensor(DHT11c) on the basis of which a fan(2 pin) can be programmed when the temperature is too high;
- a humidity sensor(same DTH11c);
- a scale consisting of a load cell and an HX711 module used to communicate with it;
- a GPS module(Neo6m) that can take the exact coordinates of the device in real time;
- a magnetic door type sensor(MC-38) for the access path to the package;
- a module with a micro SD card, on which all transport data should be stored;
- a solar panel for better autonomy of the module;
- a GSM (SIM800l with PCB) communication module, with which the data can be transmitted regularly or whenever the user wants to obtain information related to the container.

Main subjects / skills covered:

- information and communication technologies ;
- database design and administration ;
- web development;
- software engineering ;
- computer architectures;
- computer networks ;
- computer graphics ;
- microcontrollers;

- programming in low-level and high-level languages;
- numerical calculation.

Programming Languages:

- C;
- C++;
- Python;
- JavaScript;
- HTML;
- CSS.

LANGUAGE SKILLS

Mother tongue(s): **Romanian**

Other language(s):

English

LISTENING C1 READING C1 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

French

LISTENING A2 READING B1 WRITING A2

SPOKEN PRODUCTION A1 SPOKEN INTERACTION A2

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills

■ I attended an international seminar with some students from Finland, Germany and Italy, a seminar called "Running on empty? young Europeans discuss about economic, political and cultural aspects of the European Union" at "European Academy of Otzenhausen, Germany". Following this seminar I received a "Youthpass" certificate for Youth Exchanges that supports some skills perfected there, such as: native language communication, foreign language communication, digital skills, the ability to learn and adapt, social skills and civic, a spirit of initiative in leadership and teamwork, expressiveness and perseverance;

■ Good communication skills acquired in the communication seminars at the faculty;

■ I was part of a team ,and we participated in 2 robotics competitions, the RoboChallenge competition where we reached the eighth and Robotech where the main engine burned and we had to retire.

VOLUNTEERING

MGM Volunteer

[Suceava, 10/10/2014 – 10/10/2020]

MGM is a non-profit organization based on the motto: "Out of love for PEOPLE!"

The main occupations were:

■ providing educational support for children from rural areas: supplies, school supplies, equipment for various fields, programs for children (emotional counseling, education counseling, sanitary, etc.), one-day camps, one-week camps, and many others;

■ providing humanitarian, material, and financial support to disadvantaged families or anyone who needed;

The organization aims to help the following: Children from families/vulnerable areas, Mono-parental families, the Elderly, Disabled people, and Widows.