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Hello! I'm a creative software developer, with experience across a broad spectrum of technologies involving embedded programming, autonomous robotic engineering, industrial digitalisation as well as web development. My passion is to explore and develop cool ways to integrate software and hardware solutions intro practical applications with a meaningful purpose.

Accenture - *Autonomous Robotics Analyst*
Feb 2023 - present   *(C/C++, Python, SAP, UR)*

- Working in the Innovation Team on multiple POC's.
- Working close with the team to design, prototype and implement novelty solutions
- Responsible of full product development lifecycle
- Explore, test and develop new ideas in a modern innovation lab
- Ensure requirements specification and aim to offer maximum performance while ensuring product stability and adaptability.
- Create full product documentation, user manuals and additional informations
- Provide technical expertise in factories digitalisation processes.
- Integrate low level machine communication with higher levels of enterprise execution systems.
- Ensure optimal resource utilisation, improve traceability, reduce waste and energy consumption.
- Simulate production line environments in virtualisation software
- Program and interact with industrial robotic arms, create custom jobs

Quickleaf Technologies - *Full Stack Developer*
Oct 2021 - Jul 2022 (VueJS, NodeJS, MongoDB)

- Worked on a retail marketing app that allows a customer to automate and integrate their campaigns on all social media platforms.
- Worked in an Agile team of 5 devs based in Cluj and Amsterdam, in close relations with the stakeholders and the marketing team.
- I had the opportunity to be involved, learn, implement and maintain the application architecture, as well as getting a good understanding of the full development lifecycle.
- Along the process, my main focus was frontend oriented, implementing the design along with its change requests, but often having backend responsibilities as well.
- Designed and translated VueJS components into high quality code, maintaining a scalable, and optimized architecture.

- Maintained and improved existing database, optimized data flows, integrate APIs and created automation scripts for various processes.
- Followed design patterns, good practices, provided feedback and kept the documentation up to date, keen on traceability.
- Drafting periodic demos, negotiated feature implementation, possible optimizations and reworks.

AROBS Transilvania Software - *Embedded C Developer*
May 2017 - Dec 2020 (C/C++, AUTOSAR, Linux)

- Worked in several outsourcing projects for automotive industry, taking part in multi-national teams of over 200 devs.
- Got in touch with most of the roles required for such projects, ranging from coding, planning, managing and designing of products.
- Analyzed bug reports and developed suitable software patches for modules I was in charge of.
- Involved in the latest feature updates, including developing, integration, testing, performance measurements, fixing stability issues and improving the overall workflow by enhancing the process automation.
- Updated legacy code to newest standards, adapting modules to new frameworks.
- Implement and design new features using Autosar.
- Created and maintained thorough code documentation and traceability, vital for high-prio components and safety ADAS features.
- Developed and integrated a remote communication module, capable of monitoring, configuring and analyzing car telemetry data in real time. (Linux, C++, MQTT)
- Worked close with the stakeholders in order to design, implement and deliver the automotive micro controller

AROBS Transilvania Software - Internship
May 2017 - Dec 2020

- Enrolled in an Internship camp during 2nd year of University, I developed a remote controlled toy-car using a RaspberryPi and several STM32s microcontrollers.
- I took on a hands-on practical approach of every process involved in a usual project, cycling through electronic fundamentals, HW design, low level programming, up to creating the user interface, the client-server infrastructure and designing custom communication protocols.

Education:

Babeș-Balyai University of Cluj Napoca, Mathematics and Computer Science
2014-present   department: Computer Science (english)

Tiberiu Popoviciu High School of Computer Science Cluj Napoca
2013-2014   department: Computer Science

Avram Iancu High school Cluj Napoca
2002-2013   department: Computer Science

Personal Experience:

🏛 Home automation project - (Linux, C++, HTML/CSS/JS, MQTT, Python)

I've designed and implemented a server on a RaspberryPi which handles many features around my house such as lights, heating/cooling system, alarm system, coffee maker, door locks, window curtains, intercom and plenty others using sensors, actuators through a web interface. The RaspberryPi communicates with the wifi enabled arduinos through MQTT protocol and the dashboard interaction is handled by a Flask web server. Integration with Siri/Google/Alexa is also available.

📞 Telegram bot - Personal Assistant - (ESP32, C++,)

I used the Telegram bot API installed on several ESP32 microcontrollers in order to create a flexible interface through which I can read sensors data or interact with switches without the need of a centralized server or a tailored interface.

🏰 SmartBuilding monitor and control - (Linux, C++, HTML/CSS/JS, MQTT, Python)

Originally a degree project, I am now working on a product that uses a RaspberryPi as a central hub, allowing multiple remote modules to address the complex needs a modern office building such as: Controlled access using RFID tags which acts as a employer time-logger, Energy efficiency topics such as power consumption monitoring, automatic light dimmers, heating and ventilation controller, parking management system and many others.

🎡 Karting track - vehicle controller - (Linux, C++, HTML/CSS/JS, MQTT, Python)

I am developing a solution for a karting circuit that allows controlling and monitoring the karts in real time, centralizing data such as speed, position, engine rotations, temperature, usage pattern, enabling a comprehensive report about the laps, as well as the possibility to remotely control the parameters of each individual kart.
Beside the karts, many other amenities of the venue are well integrated: appointment manager, track lights system, garage features, consumption meter, etc.

⚛ Other applications: (C++, QT, Python, Linux)

Basic cloud-based switches for domestic appliances (Arduino, MQTT, C++)
A scorekeeper app for games played with friends (HTML/CSS/JS, .NET);
Spendings tracker designed specifically for personal use (HTML/CSS/JS, SQL);

Professional Skills:
- C/C++, HTML/CSS/JavaScript/TypeScript, Python
- Windows, Linux, AUTOSAR, RTOS, VueJS, NodeJS, Express, MongoDB
- IoT, MQTT, CAN, REST, Flask, Django, Google Tests
- Containers based deployment
- Git, Gerrit, Continuous Integration, AGILE (Jira, Confluence)
- MS Visual Pack (Studio, Code), Eclipse, Tresos, CANoe

Trainings, volunteering, conferences:
- **AROBS Internal traingings:** AUTOSAR, Time Management and many workshops
- **Consiliul Județean al Elevilor - 3 years - head of Department, 30+ projects, 20+ trainings**
- **StudCard - 2 years - developed StudCard Junior for all high school students (2012-2013)**
- **Inspectoratul Școlar Județean - member - School Violence Prevention Comitee**
- **Inspectoratul de Poliție Judetean - coordinated prevention campaigns among teenagers**

Contests:
- **Transilvania MegaHack - Internet of Things - Smart City**
        2016 - Cluj - mention
- **Computer Science Olympiad**
        2012 - Cluj - 5th place
- **Physics, Technology and Geography Olympiads**
        2009-2013 - 2nd-5th places