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> Embedded Systems Engineer with over 4 years of experience in developing patented technologies for startups. As an entrepreneurial visionary, I possess a comprehensive understanding of the embedded systems industry, engaging deeply in every facet of the research and development lifecycle

Education

BSc Computer Science with a Year in Industry at University of Birmingham - 2016 - 2020

- The highlight of my degree is **Project Hawk** - I researched, designed and integrated a drone for studying cell tower compatibility for comercial drone applications. From designing the PCB to developing a new blazing fast 4G network engine, this project has become the foundation stone of my career as systems engineer and assured my place in the industry early on - **See my dissertation**
- 1st class degree, being pasionate about studying Kernel programming, Network and Security, Embedded Software Engineering and Computer Systems & Architecture
- Besides low level architecture and languages of computer design, the degree exposed me to key concepts and hands-on experience for helping teams and businesses. Knowing how to implement Agile and Waterfall methods in organizations helps me deliver for big budget projects, as well as for fast and nimble startups

A Level equivalent (Romanian Baccalaureate / High School Level) in Computer Science and Advanced Maths - 2012 - 2016

- 91% in C programming
- 90% in Advanced Maths
- C1 English Language proficiency through IELTS (2017)

Key Skills

- Leadership, taking the role as a scrum master, improving team velocity during sprint planning sessions
- Expert in low level programming: OOP, multi threading, distributed networks, kernel space for ARM RISC and having experience in Bluetooth, ZigBee and LoRaWAN
- PCB prototyping, design and mid scale production, with experience in PNP assembly **see project where I am a maintainer**
- Expertise in version control, virtualization (docker, kubernetes, vagrant), continuous integration and batch testing
- Design with security and efficiency in mind: I am an expert in dynamic/remote debugging, memory checks, leak prevention with Valgrind and LWN and experience in disassembled binary
- Low-level digital and analog communication protocols such as PWM, UART, SPI, I2C and PPM and other custom analog/digital protocols
- Product design with a taste for minimalist looks

Work Experience

Director and Lead R&D Engineer - WeMBED Systems S.R.L - European Economic Area, July 2020 - Present

- Drawing on my Computer Science background and self-taught electronics design skills, I founded and managed the company across four key areas:
  - **Research**: Explored leading-edge sensor and embedded CPU technologies, aiming at creating efficient and compact devices for streamlined data collection in research applications. Resulted in patented innovations which resulted in patented pending innovations.
  - **Development**: Building upon our research, we crafted more than 30 hardware prototypes that yielded five distinct products. These achievements not only facilitated startups in delivering innovation within the life sciences domain but also played a pivotal role in attracting increased investor funding.
  - **Production and Manufacturing**: Through a strategic investment in a dedicated hardware engineering lab, we successfully achieved mid-scale production for our clients by implementing automated batch assembly techniques. Additionally, through our active participation in prestigious international trade fairs such as Embedded World and Electronica we built a network of chip manufacturers which is backing us with early access for cutting-edge chips, including sensors and microcontrollers, at favorable prices.
  - **Operations**: Leveraging my DevOps know-how, I led the way in crafting custom server architectures for each product launch - this ensured GDPR compliance, data security, and frictionless networking using custom VPNs across institutions, making it easier for our startups to deploy their solutions
- Led a tight-knit team of four, fostering balanced contributions and individual career progress while promoting a culture of ongoing learning and personal development
- Managed a range of business administration tasks, encompassing accounting oversight, customer acquisition, and cultivating strategic synergies with other businesses and developers.

DevOps Engineer and backend developer - magic42 LTD Birmingham, October 2018 - July 2019

- Managed a database restructuring project which led to the GDPR compliance of the business
- Supervised the integration, deployment and downtime prevention on a client's live server for 4 months
- Delivered security risk assessments that prevented database backdoors on multi-million e-comerce platform
- Enhanced the code review process productivity for the organization by integrating a notification system for the developers
- Maintained virtualization software such as Docker and Vagrant
- I helped the organization's social goals by presenting quarterly fitness workshops on healthy eating and exercising, which positively impacted my colleagues' mood and productivity

IT Project Manager - Study Abroad & Exchanges University of Birmingham, Feb 2018 - June 2018

- Merged two databases to comply with ERASMUS Standards
- Optimised team's website for search engines and increased number of visits by 19%
- Improved office's workflow by coaching employees on writing SQL scripts for Excel

Self-taught skills

- One of the modules in year 2 of University sparked my curiosity into low level computing which led to understanding the CPUs and memory down to logic gate level - I was disatisfied with the price, design inflexibility and quality of PCBs so I started learned how to design my own, four years ago
- Working with clients and colleagues has led me to delve deeper into the art of listening without judgment and resolving conflicts and crises without exacerbating stress
- I'm naturally lazy and always looking for the quickest option so I had to learn how to trick my brain into a productivity mindset and deliver more in less time by delegating tasks, restructuring the work pipeline and prioritization (I highly recommend reading "The Goal" by Eliyahu M. Goldratt)

Languages

- ***English*** (Fluent), ***French*** (Intermediate), ***Romanian*** (Native), *some* **German**

Hobbies

- Sports: I am a triathlete and avid cyclist. I also enjoy yoga, pilates and cross training for recovery
- Reading: I enjoy psychology books related to childhood development and deep phylosophical topics such as the nature of the universe
- 55% of the non tech content I consume online is on cooking so naturally this is a big part of my free time