Daniel Bretón Suárez

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Software engineer with experience in IT and embedded.

About me: I am an experienced software engineer who provides solid problem-solving, independence, and innovative thinking.

I focus on developing highly optimized tools and applications. I'm passionate about writing outstanding unit tests. I also have experience on managing small teams and projects. I have experience developing multi-platform applications (Linux, Windows, MacOS) and embedded.

Skills

Programming Languages

C	★★★★★	Great experience in embedded developments
Python	★★★★★	Experience in data collection automation and Kubernetes
C++	★★★★★	Experience in embedded and endpoint security.
Bash	★★★★☆	Experience in scripting, automation and endpoint security
Golang	★★★☆☆	Experience in endpoint security
Powershell	★★★☆☆	Experience in endpoint security
Assembly	★★★☆☆	Experience in embedded developments
Javascript	★★☆☆☆	No professional experience
Java	★★☆☆☆	No professional experience

Software Development

- Code quality, best practices, test driven development, debuggers, code reviews
- Continuous integration and continuous development, Gitlab pipelines, Github actions
- Life cycle management, helm charts, argoCD user, vulnerabilities fixing
- Team best practices: agile,

Embedded Knowhow

- Architectures: 8-bit ARM, 32-bit ARM, 8-bit PIC, 8051, embedded Linux
- Low-level communications: SPI, UART, I2C
- MCU foundations: IRQs, low-power management, bus clocking, RTC
- RF: RFID, NB-IoT, 4G, 3G, 2G, LoRa, 868Mhz/433Mhz p2p radios
- Hardware design: Analysis, simulations, Schematics, PCB design
- Laboratory equipment: Soldering, multimeter, Oscilloscope, signal debugging

IT Expertise

- Experienced on working with AWS
- Great experience on Kubernetes applications design (CKAD ongoing)
- Virtualization & containers: Vagrant, Virtual Box, Docker
- Automatization: Ansible, Bash, Powershell
- Multi-OS application: Linux (Debian, Ubuntu, Red Hat, CentOS, Amazon), Windows, MacOS

Professional Experience

Devo II

Position: Squad lead / Tech lead

Location: Remote

Period: From December 2024

Sector: IT -> Cybersecurity

Description: Led the technical design, development, and implementation of advanced cybersecurity solutions, including Kubernetes-based platforms. Served as the primary technical authority, guiding architectural decisions and ensuring best practices in coding, security, and system performance. Collaborated closely with product managers and stakeholders to align technical strategies with business goals. Mentored engineers, conducted code reviews, and facilitated knowledge sharing to foster technical growth within the team. Proactively identified and addressed technical challenges, driving innovation and continuous improvement in system architecture and processes.

Key Contributions:

- Architected scalable, resilient solutions for complex cybersecurity needs.
- Provided technical leadership to ensure high-quality code and adherence to best practices.
- Streamlined development workflows, improving efficiency and reducing deployment times.
- Mentored team members, enhancing overall technical expertise and collaboration.

Technologies: Kubernetes, Python, AWS, Docker

Devo I

Position: Senior software engineer

Location: Remote

Period: From March 2022 to December 2024

Sector: IT -> Cybersecurity

Description: Endpoint agent development and support: a multi-platform, multi-purpose endpoint monitoring solution based on Osquery. This solution collects diverse datasets across customer infrastructure, enabling comprehensive views for various applications, including security monitoring, IT health assessments, performance monitoring, and capacity planning. Collector server development and support: a Kubernetes-based data collector server platform, empowering users with enhanced management of namespaces, secrets, and data collectors. Providing a scalable, resilient solution aligned with cybersecurity best practices.

Technologies = C++, Golang, AWS, Vagrant, Ansible, Docker, Python, Kubernetes

Key Contributions:

- Led critical design decisions for high-performance, multi-platform solutions.
- Optimized data collection processes to ensure reliability and efficiency.
- Enhanced customer platform usability by implementing intuitive management tools.
- Ensured robust infrastructure performance and security in AWS environments.

ZIV Automation

Position: Embedded Software Engineer

Location: Bilbao Area

Period: September 2018 – March 2022

Sector: Industrial → Smart Grids

Description: Contributed to the development of cutting-edge embedded software solutions for various smart grid projects, enhancing energy efficiency and grid reliability. Designed and implemented drivers for ARM 32-bit microcontrollers, optimizing performance and ensuring seamless integration. Developed tools and scripts to streamline workflows and improve system diagnostics. Managed and mentored software teams, fostering a culture of excellence and implementing industry best practices in embedded systems development. Oversaw project scheduling and architecture design, ensuring timely delivery and robust system performance. Acted as a technology consultant, providing strategic guidance on international projects, including a high-profile deployment in Saudi Arabia.

Key Contributions:

- Led the development of core embedded systems, enhancing smart grid functionality.
- Implemented best practices, improving code quality and development efficiency.
- Successfully managed cross-functional teams to meet project deadlines.
- Provided technical consultancy on large-scale international projects.

Technologies: C, C++, Python, Assembly

Treelogic

Position: Hardware and Firmware Engineer

Location: Central Asturias Area

Period: April 2015 – September 2018

Sector: R&D → IT/Robotics

Description: Designed and developed hardware and embedded software solutions for a variety of innovative R&D projects in the IT and robotics sectors. Led the architectural design of embedded systems, ensuring robust performance and scalability. Managed project scheduling and execution, delivering solutions on time and aligned with technical specifications. Played a key role in integrating hardware and firmware components, enhancing system reliability and functionality.

Key Contributions:

- Developed custom hardware and firmware solutions for complex robotics applications.
- Designed PCB layouts, optimizing circuit performance and reliability.
- Implemented efficient project schedules, ensuring timely delivery of R&D milestones.

Technologies: C, Assembly, PCB Design

Capgemini

Position: Software engineer

Location: Central Asturias Area

Period: From October 2014 to April 2015

Sector: IT -> Consultancy

Description: Develop software for insurance company.

Technologies: Java, C++

Ikerlan

Position: Power electronics researcher

Location: Remote

Period: From September 2013 to October 2014

Sector: Industrial -> R&D

Description: Research new technology for DC-DC converters (equalizer).

Technologies: Power electronics

Education

University

Master of Science in **telecommunications engineering** conducted at Universidad de Oviedo. Asturias, Spain.

- Strong focus on calculus and algebra. Including mathematical modeling and simulations.
- Electronic theory, simulations and prototyping for power electronics, control and communications.
- Software engineering foundations. OOP and embedded devices. Computational complexity, algorithms, computer science and network architecture.
- Signal theory and stochastic processes for telecommunications systems modeling.
- Strong focus on electromagnetism theory. Antenna prototyping.
- Project management, feasibility and viability analysis.
- Technical drawing and CAD basics.
- Classical physics and quantum theory basics.
- Basics on economics.

Post-graduate Education

Subject	Company	Year	Description
Bootstrap 5 tutorial	w3schools	2023	Bootstrap 5 HTML, CSS, and JavaScript framework
Javascript tutorial	w3schools	2023	Javascript programming language
CSS tutorial	w3schools	2023	CSS stylesheet language
HTML tutorial	w3schools	2023	HTML language
Kubernetes for the Absolute Beginners	Mumshad Mannambeth	2023	Kubernetes Fundamentals, clusters and applications
Unit test for Go developers	Vinicius Silva	2023	Test driven development in Golang, unit tests and libraries
TDD in C++	Serban Stoenescu	2023	Test Driven Development in C++ with Googletest and Googlemock
The Agile Samurai Bootcamp	Jonathan Rasmusson	2023	Setup, execute, and successfully deliver Agile projects
AWS Essentials	Amazon Web Services (AWS)	2023	AWS Platform, global infrastructure, security, and the core services
Essential productivity skills	LifeLabs Learning	2022	Habits to increase daily productivity
Go: The Complete Developer’s Guide	Stephen Grider	2022	Master the fundamentals and advanced features of the Go Programming Language (Golang)
Ansible for beginers	Mumshad Mannambeth	2022	Ansible to beginner in DevOps. Practice Ansible with coding exercises
Code quality on Python	Toronto University	2021	Writing quality code that runs correctly and efficiently
Remote team management	GitLab	2021	Learn and apply remote work best practices, build your remote work policy
Gitlab best practices	ZIV	2021	How to work efficiently using Gitlab
Doxygen best practices	ZIV	2021	Best ways to document C/C++ code using doxygen
Unitary tests and continuous integration	ZIV	2020	Implement continuous integration using Jenkins
Static code analysis tools	ZIV	2020	Tools for analyzing C/C++ code quality
GNU Autotools	ZIV	2019	In-deep GNU Build System (Autotools) workshop for building software under Linux systems
Code style	Tecnalia	2019	Best practices to code efficiently in C/C++
Electrical risks and security	Tecnalia	2019	Guidelines to working safe in a environment with electrical risks

Awards

2015 Third Prize Paper Award.

The Transportation Systems Committee of the IEEE Industry Applications Society.

For the manuscript co-authored with M. Arias, M.M. Hernando, U. Viscarret and Iñigo Gil, entitled “Equalization system for serially-connected battery cells based on the wave-trap concept” as presented at the 2014 Energy conversion Congress and Exposition, Pittsburgh, PA, USA.

Codingame

C language certification

C++ language certification

Interests

Apart from being a software engineer, I am the father of a baby which takes most of my time. When he sleeps I work on home projects.

I like to have an active lifestyle, in winter I’d like to go swimming while in summer hiking is my passion. I looking forward to my baby growing strong to hike with me.

I also like going to live music concerts, enjoying the great gastronomy of nortern Spain, and sometimes I homebrew beer.

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