



# Daniel Bretón Suárez

## Contact data

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**Software engineer** with experience in IT and embedded.

**About me:** I am very independent, good at problem solving and I can think outside the box. I am always learning something new because I am very curious.

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

Mastered	C, C++
Advanced	Golang, Python, Bash, Powershell
Intermediate	Matlab/Octave, Java, Assembly

### Software Development

Methodologies	Agile
Workflows	GitFlow
Code quality	Best practices knowhow
Tools	Valgrind, GNU debugger, Cppcheck
DVCS	Git
DevOps	Gitlab, <b>Github</b>

### Embedded Experience

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

### IT Experience

Cloud services	AWS
Virtual environments	Vagrant, Virtual Box
Automation	Ansible
Containers	Docker
OS experience	Linux (multiple flavours), Windows, MacOS (basic knowledge)
Cybersecurity	Endpoint security knowhow

### Other Experience

Industrial devices	Aging tests, defective analysis, on-field patches
Manufacturing	Manufacturing instructions, integration, training
Smart grids	DLMS, massive deployment, massive updates

# Professional Experience

## Devo

Position = Senior software engineer  
Location = Remote  
Period = From March 2022  
Sector = IT -> Cybersecurity  
Description = Develop and provide engineering support for a multi-platform and multi-purpose endpoint monitoring solution based on Osquery to recollect a variety of datasets sitting in their infrastructure, efficiently process them, and create a comprehensive view that spans multiple applications and use cases in areas such as security monitoring, IT health, and performance monitoring or capacity planning. Provide visibility and collaborate with the Osquery open-source project.  
Technologies = C++, Golang, AWS, Vagrant, Ansible, Docker

## ZIV Automation

Position = Embedded software engineer  
Location = Bilbao Area  
Period = From September 2018 to March 2022  
Sector = Industrial -> Smart Grids  
Description = Develop embedded software for multiple smart grid projects. Develop drivers for ARM 32-bit MCU. Develop tools and scripts. Manage software teams. Implement good practices. Schedule software projects. Design architecture. Technology consultant. International project on Saudi Arabia.  
Technologies = C, C++, Python, Assembly

## Treelogic

Position = Hardware and Firmware engineer  
Location = Central Asturias Area  
Period = From April 2015 to September 2018  
Sector = R&D -> IT/Robotics  
Description = Develop hardware and embedded software for multiple projects. Schedule projects. Design architecture. Technology consultant and forecasting.  
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
AWS Essentials	Amazon Web Services (AWS)	2023
Essential productivity skills	LifeLabs Learning	2022
Go: The Complete Developer's Guide	Stephen Grider	2022
Ansible for beginners	Mumshad Mannambeth	2022
Code quality on Python	Toronto University	2021
Remote team management	GitLab	2021
Gitlab best practices	ZIV	2021
Cybersecurity at work	ZIV	2021
Doxygen best practices	ZIV	2021
Unitary tests and continuous integration	ZIV	2020
Static code analysis tools	ZIV	2020
GNU Autotools	ZIV	2019
Introduction to PRIME	ZIV	2019
First Aids	Tecnalia	2019
Code style	Tecnalia	2019
Electrical risks and security	Tecnalia	2019
Introduction to A.I	Stanford University	2019

## Languages

- **Spanish:** Native
- **English:** Writing and listening C1, speaking B2.

## 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

Music, hiking, running, science, homebrew beer, culture, gastronomy

## Other links of Interest



<https://www.linkedin.com/in/dabresua/>



<https://dbsportfolio.wordpress.com/>



<https://bit.ly/3xL5EvP>

<https://github.com/dabresua>

<https://www.codewars.com/users/dabresua>



[https://www.hackerrank.com/d\\_breton\\_suarez](https://www.hackerrank.com/d_breton_suarez)

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