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

Software

I speak fluently	C, C++
I can talk	Golang, Python
Scripting	Bash, Powershell
Others	Matlab/Octave, Java, Assembly
Code quality tools	Valgrind, GNU debugger, Cppcheck
DevOps Tools	Git, Gitlab, **Github**

Embedded experience

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

Other experience

Virtual environments	Valgrind, Virtual Box, AWS
Basic IT tools	Bash and PowerShell console knowhow
Cybersecurity	Endpoints based on **Osquery**
Industrial devices	Aging tests, defective analysis, on-field patches
Manufacturing	Manufacturing instructions, integration, training
Smart grids	DLMS, massive deployment, massive updates

Profesional experience

Devo

```
Position    = "Senior software engineer"
Location    = "Remote"
Period      = "From March 2022"
Sector      = "IT -> Cybersecurity"
Description = "Maintain and develop an endpoint agent based on Osquery. "
              "Provide engineering support to clients. "
```

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. "
```

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. "
```

Capgemini

```
Position    = "Software engineer"
Location    = "Central Asturias Area"
Period      = "From October 2014 to April 2015"
Sector      = "IT -> Consultancy"
Description = "Develop software for insurance company. "
```

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)."
```

Sound technician (multiple employers)

```
Position    = "Sound technician"
Location    = "Multiple"
Period      = "Multiple"
Sector      = "Shows and Events"
Description = "Live events. Sound devices maintenance."
```

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
Essential productivity skills	LifeLabs Learning	2022
Go: The Complete Developer’s Guide	Stephen Grider	2022
Ansible for beginers	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

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