



Daniel Bretón Suárez

Contact data

d.breton.suarez@gmail.com
<https://www.linkedin.com/in/dabresua/>
<https://dbsportfolio.wordpress.com/>

Embedded software engineer with experience in electronic design and product development.

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
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 (online)	2019

Languages

- **Spanish:** Native
- **English:** Advanced user. Cambridge English CEFR level C1

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.

Profesional experience

Role	Company	Duration
Embedded software engineer ¹	ZIV Automation	From september 2019
Embedded software engineer	Tecnalia	1 year
HW/FW engineer	Treelogic	3 years
Software engineer	Capgemini	6 months
Power electronics researcher	Ikerlan	1 year
Sound technician	multiple locations	-

Key skills

Embedded programming languages	C, C++, Assembly
Other programming languages	Python, Matlab/Octave, Bash, Java
Distributed version control systems	Git, subversion

Software

Static analysis	valgrind, GNU debugger, cppcheck
DevOps	Gitlab, Github, Jenkins
Documentation	Doxygen, markdown
Distribution	Software releases, changelogs
Product development	Bug reporting, continuous integration, unitary tests

Embedded

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

Electronics

Analysis	Theoretical analysis, simulations using SPICE modeling or Matlab
Design	Schematics and PCB
Basics	Chip soldering, multimeter, laboratory equipment knowhow, electrical security
Signal debugging	Oscilloscope, multi-protocol decoders

Product development

Project management	Schedule, milestones, activities, deliverables
Long-lasting devices	Aging tests, defective analysis, patches
Manufacturing	Manufacturing instructions, integration, training

Office basics

Operative systems	Windows, linux (debian based), virtual machines
Networking	ssh, remote desktop
Microsoft office suite	Word, Excel, Power point

Highlighted projects

More detailed information available at my [personal portfolio](#).

Foggy radar

Company	Treelogic
Client	Ministry of development of Spain
Description	A technological solution to virtualize drivers visibility on foggy conditions
Technologies	Radar, smart radio, traffic lights
Role	Hardware & firmware engineer, project manager
Years	2016 - 2019

Robots for kids

Company	Treelogic
Client	Adele Robots, Edelvives
Description	A consumer electronic device for educating kids at schools
Technologies	Robotics, consumer electronics
Role	Hardware engineer
Years	2018 - 2019

Smart meters I

Company	Tecnalia
Client	ZIV, Endesa
Description	A embedded software development on a smart meter for the spanish market
Technologies	Metering, smart grids, meters and more
Role	Firmware engineer
Years	2019

Smart meters II

Company	ZIV, Alfamar
Client	Saudi Electricity Company
Description	A huge project on smart grids for the whole kingdom of Saudi Arabia
Technologies	Metering, smart grids, NB-IoT, DLMS, 2G, PRIME
Role	Firmware engineer, head of software
Years	Ongoing, started on 2019

Interests

Music, hiking, running, engineering, physics, personal projects, homebrew beer, gastronomy, cultural events.

This document is intended to be public, if you require further information like a phone number, please consider to use the contact methods listed above.

Last modification: 26/06/2021

Lastest revision of this document can be found at:

- html responsive: <https://dabresua.github.io/>
- pdf: https://github.com/dabresua/dabresua.github.io/raw/master/DBS_CV_remote.pdf

This document has been generated using markdown and pandoc, source code is available at <https://github.com/dabresua/dabresua.github.io>

1. International experience on Saudi Arabia 2020.↩