Daniel Bretón Suárez

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https://dbsportfolio.wordpress.com/

Embedded software engineer with experience in **hardware** development 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 analisys.
- Technical drawing and CAD basics.
- Classical physics and quatum theory basics.
- Basics on economics.

Conducted at work

Subject	Company	Year
Gitlab best practices	ZIV	2021
Unitary tests and continous integration	ZIV	2020
Software analisys tools	ZIV	2020
Autotools	ZIV	2019
Introduction to PRIME	ZIV	2019
First Aid	Tecnalia	2019
Introduction to A.I.	Standford University (online)	2019

Languages

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

Awards

2015 Third Prize Paper Award.

The Trasportation 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

- **Programming languages**: C, C++, Python, Matlab/Octave, Bash, Assembly
- **Architectures**: 8-bit ARM, 32-bit ARM, 8-bit PIC, 8051, linux based (Debian)
- **Distrubuted version control systems**: Git, subversion
- **Continous integration**: Gitlab, Github, Jenkins
- **Electronic basics**: Circuit analisys, chip soldering, oscilloscope and analysis tools

Other skills and experience

- **Low-level communications**: SPI, UART, I2C, DMA
- **Low-level drivers**: IRQs, low-power management, bus clocking, RTC
- **Embedded RF**: RFID, Bluetooth, NB-IoT, 4G, 3G, 2G, LoRa, 868Mhz/433Mhz radios
- **Smart grids**: DLMS, PRIME, Meters and more, Smart meters
- **Long-lasting devices**: Flash maintenance, Aging tests, Defective analysis

Highlighted projects

More detailed information available at my personal portfolio. Also available the ongoing projects.

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 ligths
Role	Hardware & firmware engineer, project management
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
Role	Firmware engineer
Years	2019

Smart meters II

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

Interests

Music, hicking, running, personal projects, surf, gastronomy, science & engineering, 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.

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Lastest version of this document can be found at:

- htlm 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

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1. International experience on Saudi Arabia 2020.↵