Daniel Bretón Suárez

Contact data

https://dabresua.github.io/
d.breton.suarez@gmail.com
https://www.linkedin.com/in/dabresua/

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
C++	★★★★★	Experience in embedded and endpoint security.
Golang	★★★★☆	Experience in endpoint security
Python	★★★★☆	Experience in data collection automation and Kubernetes
Bash	★★★★☆	Experience in scripting, automation and 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
- Continuous integration and continuous development, Gitlab pipelines, Github actions
- Agile Development & Scrum

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 Experience

- Cloud: AWS
- Virtualization & containers: Vagrant, Virtual Box, Docker, Kubernetes
- Automatization: Ansible, Bash, Powershell
- Multi-OS application: Linux (Debian, Ubuntu, Red Hat, CentOS, Amazon), Windows, MacOS

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
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▬▬▬ 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
Ansible for the Absolute Beginners	Mumshad Mannambeth	2023	Ansible Fundamentals, deployments, inventory files
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
Introduction to PRIME	ZIV	2019	Prime protocol basics for communicating using the electricity network
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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