

# Daniel Bretón Suárez

## Contact data

✉ [dabresua.github.io](mailto:dabresua.github.io)    [d.breton.suarez@gmail.com](mailto:d.breton.suarez@gmail.com)    [linkedin.com/in/dabresua](https://www.linkedin.com/in/dabresua)

## Cloud-Native Software Engineer - Kubernetes | Python | Go

**About me:** I'm a software engineer with a strong foundation in embedded systems and a current focus on cloud-native architectures. I specialize in designing and operating Kubernetes-based platforms, with hands-on experience in Python, Go, and AWS. I thrive in complex environments, contributing both as a team leader and an independent engineer.

## Skills

### Programming Languages

Python	★★★★★	Automation, Kubernetes tooling, scripting, data collection
Golang	★★★★☆	Cloud-native backend development, collectors, performance-critical services
Bash	★★★★☆	CI/CD automation, system scripting, container lifecycle
C++	★★★★★	Low-level agents, cross-platform security tooling
C	★★★★★	Legacy support, embedded systems, performance tuning
Javascript	★★★☆☆	Used for browser-based automation and enhancing internal tools
Powershell	★★★☆☆	Windows-based automation and endpoint support
Assembly	★★☆☆☆	Embedded firmware, optimization at low level
Java	★★☆☆☆	Some exposure, not used in production systems

### Software Development

- Focus on **code quality**, best practices, TDD, and maintainability
- Skilled in **debuggin, profiling**, and conducting code reviews
- Experience with **CI/CD pipelines** using GitLab CI and GitHub Actions
- Familiar with **Agile methodologies** and collaborative team practices

### Cloud & Infrastructure

- **Kubernetes** (advanced): Application design, namespace management, secrets, Helm, ArgoCD, hybrid GitOps workflows (CKA in progress)
- **Cloud Platforms:** AWS (IAM, EC2, EKS), cloud security best practices, high availability patterns
- **Containers & Virtualization:** Docker, Vagrant
- **Automation & IaC:** Ansible, Bash, PowerShell
- **CI/CD:** GitLab CI, GitHub Actions - automated build, test, and deployment pipelines
- **Operating Systems:** Linux (Debian, Ubuntu, Red Hat, Amazon Linux), Windows, macOS

### Cloud-Native Highlights

- Designed and deployed **Kubernetes-based data collection systems** for cybersecurity environments (Devo)
- Architected **secure, scalable platforms** using Helm, ArgoCD, and GitOps principles
- Implemented **observability patterns** (metrics, logging, probes) for production clusters
- Applied **container security best practices** and namespace isolation policies
- Developing **CKA-level expertise** through hands-on work and certification prep

## Embedded Systems Expertise

- 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

## Professional Experience

### Devo II

**Position:** Senior software engineer and tech lead

**Location:** Remote

**Period:** From December 2024

**Sector:** IT -> Cybersecurity

**Description:** Led the design and delivery of advanced cybersecurity solutions built on Kubernetes-based platforms. Acted as the primary technical authority, driving architectural decisions, enforcing best practices, and aligning engineering efforts with product and business objectives. Championed hybrid GitOps workflows and cloud-native patterns to improve system scalability, security, and performance. Mentored engineers, conducted code reviews, and fostered a culture of continuous learning and technical excellence. Proactively tackled architectural and operational challenges, contributing to the evolution of a robust, secure platform.

#### Key Contributions:

- Designed and implemented **hybrid GitOps workflows** using Helm and ArgoCD, combining Git-based configurations with in-cluster Kubernetes objects.
- Developed and maintained a **Kubernetes-based collector infrastructure** for secure, scalable data ingestion.
- Defined and enforced **namespace policies, secret management, and pod security** standards in production environments.
- Administered and optimized multiple **EKS clusters** in production environments.
- Seamlessly migrated multiple clients between clusters with minimal downtime.
- Developed and maintained **data collector components** running as Kubernetes-native services.
- Architected **resilient, scalable platforms** tailored for cybersecurity data processing.
- Provided **technical leadership**, ensuring adherence to clean code, security practices, and platform standards.
- Streamlined **development and deployment workflows**, reducing cycle times and improving reliability.
- **Mentored engineers**, fostering technical growth and strong collaboration across the team.

**Technologies:** Kubernetes, Python, Go, AWS, Docker, Bash, GitLab CI

### Devo I

**Position:** Senior software engineer

**Location:** Remote

**Period:** From March 2022 to December 2024

**Sector:** IT -> Cybersecurity

**Description:** Endpoint agent development and support: a multi-platform, multi-purpose endpoint monitoring solution based on Osquery. This solution collects diverse datasets across customer infrastructure, enabling comprehensive views for various applications, including security monitoring, IT health assessments, performance monitoring, and capacity planning. Collector server development and support: a Kubernetes-based data collector server platform, empowering users with enhanced management of namespaces, secrets, and data collectors. Providing a scalable, resilient solution aligned with cybersecurity best practices.

**Technologies** = C++, Golang, AWS, Vagrant, Ansible, Docker, Python, Kubernetes

#### Key Contributions:

- Led critical design decisions for high-performance, multi-platform solutions.
- Optimized data collection processes to ensure reliability and efficiency.
- Enhanced customer platform usability by implementing intuitive management tools.
- Ensured robust infrastructure performance and security in AWS environments.

## ZIV Automation

**Position:** Embedded Software Engineer

**Location:** Bilbao Area

- **Period:** September 2018 - March 2022

**Sector:** Industrial → Smart Grids

**Description:** Contributed to the development of cutting-edge embedded software solutions for various smart grid projects, enhancing energy efficiency and grid reliability. Designed and implemented drivers for ARM 32-bit microcontrollers, optimizing performance and ensuring seamless integration. Developed tools and scripts to streamline workflows and improve system diagnostics. Managed and mentored software teams, fostering a culture of excellence and implementing industry best practices in embedded systems development. Oversaw project scheduling and architecture design, ensuring timely delivery and robust system performance. Acted as a technology consultant, providing strategic guidance on international projects, including a high-profile deployment in Saudi Arabia.

**Key Contributions:**

- Led the development of core embedded systems, enhancing smart grid functionality.
- Implemented best practices, improving code quality and development efficiency.
- Successfully managed cross-functional teams to meet project deadlines.
- Provided technical consultancy on large-scale international projects.

**Technologies:** C, C++, Python, Assembly

## Treelogic

**Position:** Hardware and Firmware Engineer

**Location:** Central Asturias Area

- **Period:** April 2015 - September 2018

**Sector:** R&D → IT/Robotics

**Description:** Designed and developed hardware and embedded software solutions for a variety of innovative R&D projects in the IT and robotics sectors. Led the architectural design of embedded systems, ensuring robust performance and scalability. Managed project scheduling and execution, delivering solutions on time and aligned with technical specifications. Played a key role in integrating hardware and firmware components, enhancing system reliability and functionality.

**Key Contributions:**

- Developed custom hardware and firmware solutions for complex robotics applications.
- Designed PCB layouts, optimizing circuit performance and reliability.
- Implemented efficient project schedules, ensuring timely delivery of R&D milestones.

**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

## Certifications & Training in Cloud-Native Tech

- Kubernetes for the Absolute Beginners - Mumshad Mannambeth (2023)
- CKA preparation (ongoing) - 2025
- AWS Essentials - Amazon Web Services (2023)
- Ansible for Beginners - Mumshad Mannambeth (2022)
- Unit Test for Go Developers - Vinicius Silva (2023)
- Go: The Complete Developer's Guide - Stephen Grider (2022)
- Code Quality on Python - Toronto University (2021)

## 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.

## Other Post-graduate Education

- Bootstrap 5 tutorial - w3schools, 2023
- JavaScript tutorial - w3schools, 2023
- CSS tutorial - w3schools, 2023
- HTML tutorial - w3schools, 2023
- TDD in C++ - Serban Stoenescu, 2023
- The Agile Samurai Bootcamp - Jonathan Rasmusson, 2023
- Essential productivity skills - LifeLabs Learning, 2022
- Remote team management - GitLab, 2021
- GitLab best practices - ZIV, 2021
- Doxygen best practices - ZIV, 2021
- Unitary tests and continuous integration - ZIV, 2020
- Static code analysis tools - ZIV, 2020
- GNU Autotools - ZIV, 2019
- Code style - TecNALIA, 2019
- Electrical risks and security - TecNALIA, 2019

# Awards

### IEEE Third Prize Paper Award (2015)

Recognized by the IEEE Transportation Systems Committee for co-authoring a paper on battery equalization systems presented at ECCE 2014.

### Codingame Certifications

- [C Certification](#)
- [C++ Certification](#)

# Interests

Outside of work, I enjoy hiking, swimming, and homebrewing. I'm also the proud father of a young child—he keeps me grounded and motivated.

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