

# Adrien Bustany

A computer engineer with a taste for craftsmanship, good practices and well designed systems  
Ensimag Engineering School of Computer Sciences & Applied Mathematics

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## Experiences

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- July 2023 (4 months) **Personio**: Freelance lead engineer for Personio Whistleblowing
- Implement major changes in multitenancy two weeks before public release.
  - Proactively find/fix two major security issues.
  - Mentor the team through calls/code reviews, ensure design decisions are properly documented and discussed before people jump into the code.
- References: Luis Rivas <luis.rivas@personio.de>  
*Technologies: Go, gRPC, Typescript, React, k8s*
- June 2022 (6 months) **Personio**: Lead engineer of Personio Conversations
- Relaunch BackHQ as Personio Conversations in less than two months, adapting the code to run into the Personio infrastructure.
  - Grow the team, bring new members up to speed and mentor them on an ongoing basis.
- References: Luis Rivas <luis.rivas@personio.de>, James Lafa <james.lafa@personio.de>  
*Technologies: Same as at Back HQ + k8s, Helm*
- September 2019 (2+ years) **Back HQ**: Lead engineer in the backend team, owning a Go gRPC server (elegant monolith) talking to a Typescript GraphQL API gateway.
- Discuss feature requirements with the product team, come up with technical proposals, and implement them.
  - Manage all infrastructure aspects, from CI pipeline to monitoring and log collection, from deployment scripts to access control and audit.
  - Deal with production issues, customer support, and help sales with technical questions.
  - Onboard both junior and senior engineers in the team, evangelize best practices among team members, keep tech debt in check.
  - Develop a document suggestion service based on sentence similarity analysis.
  - Analyze and fix stability and performance issues across the stack (frontend to backend).
- References: James Lafa <james@backhq.com>, Jan Ustohal <jan.ustohal@backhq.com>, Cameron Hashemi <cameron.hashemi@backhq.com>  
*Technologies: Go, gRPC, Typescript, GraphQL, React, Terraform, AWS (Fargate), Python, spaCy, NLTK*
- October 2018 (3 months) **Foundfair VC**: Help to develop the backend and define the product for an incubating project of the investment fund. Develop a product classification taxonomy loosely based on the OWL model, implement a web-based taxonomy editor based on Python/Flask and React.
- Reference: Burckhardt Bonello <burckhardt.bonello@foundfair.de>  
*Technologies: Python/Flask, React, Flow, Google Cloud*
- January 2018 (9 months) **Systerel**: Participate to the development of S2OPC, an open-source, secure implementation of the OPC-UA protocol: clean up legacy issues and contribute new features, implement several sanitizers and code analyzers in continuous integration to increase code quality.
- Reference: Vincent Lacroix <vincent.lacroix@systerel.fr>  
*Technologies: C, ASan/UBSan/TSan sanitizers, Coverity Scan, Clang static analyzer*
- May 2017 (2 months) **Systerel**: Implement a model documentation tool for the in-house model checking language: write a parser for the language and for the documentation comments, integrate the output in the Sphinx documentation toolchain.
- Reference: Nicolas Breton <nicolas.breton@systerel.fr>  
*Technologies: Rust, Python*

- January 2017 (12 months) **Systemel:** Use model checking to find safety bugs in a computer based interlocking control software: model the environment of the interlocking (trains, tracks, points) and analyze safety bugs with the clients. Improve the model analysis tools.  
Reference: Nicolas Breton <nicolas.breton@systemel.fr>  
*Technologies: model checking, C, Gtk*
- April 2016 (1 month) **Systemel:** Develop an Eclipse based IDE integration for an homomorphic encryption toolchain: implement syntax highlighting, code completion, project creation assistants.  
Reference: Mathieu Clabaut <mathieu.clabaut@systemel.fr>  
*Technologies: Java, Eclipse*
- March 2016 (2 months) **Systemel:** Develop a demonstrator for a homomorphic encryption technology doing server-side face recognition on encrypted data: analyze various face recognition algorithms, develop the android application and the server side part.  
Reference: Mathieu Clabaut <mathieu.clabaut@systemel.fr>  
*Technologies: C++, OpenCV, Java, JNI, Android, JBoss, Gradle*
- January 2016 (18 months) **Systemel:** Maintain and improve a model checking tool developed by the company: adapt to the evolutions of the modeling language, improve model debugging tools, increase test suite coverage.  
Reference: Vincent Lacroix <vincent.lacroix@systemel.fr>  
*Technologies: C*
- July 2014 (18 months) **HERE:** design, implement, test, optimize and operate a versioned storage system for partitioned (map) data. The system is designed to stay fast even with a large number of versions, and allow at the same time high-throughput operations on the entire maps and efficient access to individual tiles. Several teams inside the company are migrating to this system as their storage solution.  
Reference: Reinhard Köhn <reinhard.koehn@here.com>  
*Technologies: Scala/Akka/Spray for the initial prototype then replaced by Go, Redis, Cassandra, Amazon AWS S3*
- May 2014 (8 months) **HERE:** design and prototype a map data delivery service optimized for mobile devices.  
Reference: Reinhard Köhn <reinhard.koehn@here.com>  
*Technologies: Scala/Akka/Spray, Redis*
- July 2013 (10 months) **Nokia:** design and implement a cloud platform for an internal project based on Amazon AWS: design the network layout, the deployment pipeline, set up auxiliary services like centralized logging. Train other teams to use it.  
Reference: Titos Saridakis <titos.saridakis@nokia.com>  
*Technologies: Amazon AWS (various services), Puppet, Vagrant, Jenkins, RPM*
- September 2012 (11 months) **Nokia:** implement the connectivity related parts of a WebKit-based web runtime, running on top of a leading mobile operating system. Study the internal connectivity stack and system tools of the platform and how to bridge them to the JavascriptCore Javascript engine.  
Reference: Sampsa Fabritius <sampsa.fabritius@nokia.com>  
*Technologies: JavascriptCore, other technologies can't be mentioned due to NDAs.*
- December 2011 (12 months) **Nokia:** participate in defining the working practices (SCM usage, branching and releasing, etc.) of the team. Propose, setup and run the tools used daily by the engineers (~ 200 people). Design a fast, reliable continuous integration system to ensure code quality. Operate the servers running the tools. Provide trainings and support for those tools.  
Reference: David Vazquez <david.vazquez-cortizo@nokia.com>  
*Technologies: Git, Gerrit, Jenkins, BTRFS (snapshotting filesystem), LXC (Linux container technology), Puppet, various collaborative tools (IRC, pastebin, etherpad, ...)*
- December 2011 (18 months) **Nokia:** investigate device connectivity technologies for efficient, low-power peer-to-peer or internet links. Implement prototypes on a Linux based mobile device.  
Reference: Sampsa Fabritius <sampsa.fabritius@nokia.com>  
*Technologies: Bluetooth, Bluetooth-LE, Wifi, Wifi-Direct, BlueZ, Linux Kernel, OpenVpn, virtual IP/ethernet interfaces (TUN/TAP)*
- September 2010 (15 months) **Nokia:** develop and optimize the contacts storage backend for the Nokia N9, aggregating contacts from various sources (local addressbook, IM, social services...)  
Reference: Hrishikesh Brahmakal <hrishikesh.brahmakal@nokia.com>  
*Technologies: C++/Qt, RDF, SPARQL, Telepathy (IM framework)*
- March 2010 **Buxus:** Co-create the startup Buxus. We proposed a free online personal finance management tool (the company is now closed).  
*Technologies: Java/Google Web Toolkit, Perl, machine learning*

## Technical skills

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Languages	Go, Typescript, Python, Rust, Java, C/C++, Shell
Web UI	React.js, Solid.js
Cloud	Amazon Web Services, Azure. Terraform.
RPC	gRPC, GraphQL
UI Toolkits	Qt, GTK
Embedded	Android (application + platform level knowledge), Yocto
System tools	valgrind, gdb, sysprof, perf, strace...
VCS	Git

## Education

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July 2009	Exchange in the Pontificia Universidad Catolica, Santiago, Chile (one semester)
2007-2010	Ensimag Engineering School <i>Master's degree in Computer Sciences, specialization in Information Technologies</i>

## Some projects I've authored (see my GitHub)

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**GoRetro**: realtime collaborative retrospective tool (try it at <https://goretro.xyz>).

**libratone-rs**: reverse engineered implementation of the Libratone speakers control protocol.

**SaugLog**: Simple privacy-first Vue.js PWA to log baby feedings.

## Some projects I've contributed to

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**Tracker**: a personal search solution based on an RDF store.

**KDE-Nepomuk**: many contributions to the user interface, and base classes

**PackageKit**: author and former maintainer of the Qt bindings

I'm known on OpenHub as [webustany](#), and on GitHub as [abustany](#).

## Spoken languages

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**French** Mother tongue

**English** Read, written, spoken fluently (used everyday)

**Spanish** Read, written, spoken fluently (I lived one year in Chile and use it regularly)

**German** Read, written, conversational

**Russian** Strong notions (studied 7 years)

## Other activities

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My work consisting mainly of abstract thinking, I like to do **real** things with my hands when I have free time. I'm a **rock climber**, I enjoy **woodworking** and making stuff with **concrete**, and I'm learning to play the **clarinet**. I try to travel regularly, and when I'm at home I'm regularly hosting travelers from all around the world for free via the **Couchsurfing** and **Trustroots** networks (over 100 people so far!).

When I was in university, I was a board member of BEST. BEST is a European association aiming to promote European spirit amongst science students by organizing various events (courses, cultural exchanges) everywhere in Europe. For BEST, I organized a European conference week on nano technologies. Around 30 people were able to travel to Grenoble, and assist to classes on various subjects, all for free.