

# 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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Born on Dec. 14<sup>th</sup>, 1987 (33 years old)

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## Experiences

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- 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) **Systemel:** 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@systemel.fr>  
*Technologies: C, ASan/UBSan/TSan sanitizers, Coverity Scan, Clang static analyzer*
- May 2017 (2 months) **Systemel:** 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@systemel.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, Open-Vpn, 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*

## Education

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- July 2009 Exchange in the Pontificia Universidad Catolica, Santiago, Chile (one semester)
- 2007-2010 Ensimag Engineering School  
*Master's degree in Computer Sciences, specialization in Information Technologies*
- 2005-2007 Preparatory classes at Lycée Paul Cézanne (Aix en Provence)
- 2005 Scientific baccalauréat with mention

## Technical skills

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Languages	Go, Rust, Java, C/C++, Python, Shell, HTML, Javascript/Typescript (browser side & NodeJS), CSS
UI Toolkits	Qt, GTK
Embedded systems	Android (application + platform level knowledge), Yocto
Cloud platforms	Amazon Web Services (EC2, S3, DynamoDB, Cloudformation, Cloudwatch...)
Network protocols	Application protocols (HTTP, FTP, IMAP, SMTP, XMPP...), transport layers (TCP), physical layers (Bluetooth, WiFi)
System tools	valgrind, gdb, sysprof, perf...
VCS	Git, SVN

## 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.

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This document was last updated on November 2, 2021. Please contact me if you'd like a newer version.