Vincent Jacques

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References on request   http://vincent-jacques.net/

Passionate software engineer
École Centrale Paris

I started programming when I was 12, and haven't stopped learning since then, exploring languages, technologies, and methodologies. After twelve years of professional software engineering, I value maintainable and evolutive source code and the use of tools and automation to create working, reliable software.

Work experience

Oct. 18 – Feb. 19   *Datadog*, Paris, France: **software development engineer**

Java
Kubernetes

I joined the "logs intake" team, in charge of ingesting 100 billions lines of logs daily. I conducted a large clean-up work to remove a now-unused legacy feature from the code.

This experience was brief because my manager and I couldn't find a common balance between speed and deep understanding. It was a very good learning opportunity, both technical and human.

Jan. 16 – Dec. 17   *University College London*, UK: **research engineer**

OCaml
MIT Alloy

I was assisting Dr Jade Alglave after her Brian Mercer Award for Innovation. Her research focuses on modeling memory accesses for multi-core microprocessors. She created a domain-specific language named CAT.

I wrote an OCaml tool comparing CAT memory models. It translates models to Alloy to search for executions that behave differently in the two models. It then produces small test programs in assembly language. A preexisting tool can run them to verify that the difference exists on actual hardware.

Oct. 13 – Oct. 14   *Amazon*, Seattle, WA, USA: **software development engineer**

Java
DynamoDB
REST API
Amazon Web Services

Our team was integrating the GoodReads social network into the Kindle. The main constraint for our systems was the ability to scale with the number of users.

I replaced a network-accessed database (25 million entries) with one replicated on all servers (using an internal technology). I handled this project end-to-end, from design and code to the migration of the data and follow-up in production.

I fixed many bugs. For example I fixed our usage of Amazon CloudSearch to respect the language of the user's query.

I participated in API design and reviews (my knowledge of the GitHub API v3 was very helpful) as well as storage design and reviews (mainly using Amazon DynamoDB).

I conducted a dozen technical hiring interviews.

Dec. 10 – Apr. 13   *Criteo*, Paris, France: **software development engineer**

C#
git

I worked on many areas of Criteo's web adverting platform (1 billion displays a day). I ended up leading the « Development support » team (5 members). We were in charge of:

- Technical libraries used by most of our 130 developers. I designed the configuration facility still used globally in Criteo;
- Development tools (Gitorious, Nuget server, continuous integration, etc.). I managed an intern to develop our new deployment tool. It divided by 10 the duration of the deployment on our 500+ servers.

I volunteered to act as release manager while we were recruiting one. During 5 months, I was synchronizing about 10 teams involved in the weekly release of our platform.

I conducted more than 50 hiring interviews focused on object-oriented design skills.

Sept. 08 – Nov. 10   *Thales*, near Paris: **software engineer on Automated Train System**

C++
Python

We were fixing bugs and making functional evolutions on the software used in more than 20 cities for commercial exploitation of subway lines. In about one year, I became a reference point for design and coding questions.

I analyzed the different types of temporary exploitation loops and refactored how we handle them, allowing us to apply our software to 3 more lines in Paris.

I fixed the way delayed trains were propagated in the timetable, considerably reducing the number of transient bugs reported.

I supervised an intern to build a tool drawing subway lines from their structured description.

2008 – 2011	*École Centrale Paris*: **part-time teacher for senior year students**

A former teacher of mine hired me to guide 3 students per year during their robotics project.

Dec. 06 – Aug. 08	*Amadeus*, Sophia Antipolis, France: **software development engineer**

C++

Amadeus was re-architecturing its whole booking platform (used by 100 000 travel agencies) to use C++ on Unix, to improve modularity and evolutivity. My team (9 members) was writing software to handle queries about hotel availability.

I integrated an API provided by Accor Hotels.

I also took over a Perl program comparing the new behavior to the old one based on logs. This tool had been unsuccessful for two months. It became urgent to validate the new platform and I fixed the tool in two weeks.

May 06 – Oct. 06	*SKF*, Tours, France: **engineering intern**

I designed, implemented (in Delphi) and validated a proof of concept for an algorithm compensating the drift of a sensor-bearing used in washing machines.

2001 – 2005	**Private teacher for high school students (mathematics and physics)**

Open-source

PyGithub (2400+ stars on GitHub) is a Python wrapper for GitHub's REST API v3. I authored it and maintained it for a few years. It is now packaged in some UNIX distributions and maintained by the community. I still occasionally provide some guidance when they e-mail me.

My other significant projects are described on http://vincent-jacques.net/.

Education

2003 – 2006	*École Centrale Paris*: **general engineering degree**

I've studied the basics of engineering sciences, with a focus on software and electronics.
Technical projects: six-legged robot, automated sail boat model.
Humanitarian project in an orphanage near Chennai, India.

Languages

French	Native	English	Fluent

Self-learning

Methodology	SOLID, DRY, KISS, design patterns, coupling, cohesion, code smells, variance
Modeling	MIT Alloy
Languages	Python, C++ (Boost), OCaml (Core), JavaScript (Node, jQuery)
Storage	SQL (MySQL, PostgreSQL), MongoDB, DynamoDB
Systems	GNU/Linux, Windows, macOS
Presentation	Open-office, Microsoft Office, Markdown, reStructuredText (Sphinx), HTML5+CSS (Bootstrap), LaTeX, MathJax, GraphViz

Other activities

Water rockets, puzzle games, radio-controlled models, electronics and robotics.

Foster family for Handi'chiens: my partner and I are hosting and educating a 1-year-old Labrador retriever puppy named Nirka. When she is 2, she will become a service dog and help a person with a disability.