Antonin Carette

Game Programmer

Personal Details

Date Of Birth	10th of September, 1990
Languages	French,English
Children	1

Education

2017 **Assistant professor**, *Assistant professeur*, **University of Luxembourg**, *Luxembourg*.
I teached and evaluated bachelor students in Big Data and Artificial Intelligence courses

2014–2016 **Master Degree of Computer Science**, *Master en Informatique*, **University of Lille**, *France*.
Specialisation: Optimization Algorithms and Artificial Intelligence

2012–2014 **Bachelor Degree of Computer Science**, *Licence Informatique*, **University of Lille**, *France*.

Work Experience

2022 **Game Programmer**, *Programmeur jeux vidéo*, **RedArtGames**, *France*.
I do video game and game engine ports from PC to modern consoles (Sony PlayStation 4 and PlayStation 5, Microsoft Xbox One family and Xbox Series family, Nintendo Switch).
Programming environment: C/C++, GameMaker, native graphics APIs (DirectX, NVN, ...).

2021–2022 **Full Stack Developer**, *Développeur Full Stack*, **DernierCri**, *France*.
I wrote production-level code for multiple projects from startups and large companies.
Programming environment: TypeScript, JavaScript, Elixir.

2021 **R&D Engineer**, *Ingénieur R&D*, **DataThings**, *Luxembourg*.
I helped to develop solutions for companies using artificial intelligence algorithms, from proof-of-concepts to production services. I wrote production-level code to integrate and deploy our solutions, as binaries or micro-services, in client's code base or cloud provider(s).
Programming environment: Python, C, C++.

2018–2021 **Software Engineer**, *Ingénieur Logiciel*, **TadaWeb**, *Luxembourg*.
I helped to develop tools and solutions for both the Core and Machine Learning teams, from proof-of-concepts to production services. I wrote production-level code to deploy on our own cloud stack, for clients all over the world, using SCRUM principles.
Programming environment: Python, Go, Rust, C++.

– Moselle, France
✉ *antonin@carette.xyz*

2016–2018 **Data Scientist and Software Developer**, *Data Scientist et Développeur Logiciel*, **DernierCri**, *France*.

I conducted Data Science activities for many companies, and developed web and mobile apps using Django, React, and React-Native.
Programming environment: Python, Rust, React, React-Native.

RESEARCH PROJECTS

2016-2017 **Assess and evaluating the energy consumption of Android apps code smells**, *LATECE team*, UQÀM, Montréal.

I built a strong protocol to measure the energy consumption of an Android device, in order to evaluate code smells impact. I contributed to the tool "FirefoxOS Powertool" and wrote, as first author, a research paper about the method I developed. The research paper has been submitted and accepted at **SANER 2017** after peer review.
Programming environment: Python, Rust, Java (for Android).

2015 **Prediction of bugs propagation for big Java projects**, *SequeL team*, INRIA Lille, France.

I built and experimented a method to study and predict the prediction of bugs in big Java projects. We submitted a paper (second author) to **RAISE**, which has been accepted in 2016 after revision.
Programming environment: Python.

Publications

2017 **Mastering Rust: Advanced concurrency, macros, and safe database**, *Packt Edition*, by Vesa Kaihlavirta.

Lead Reviewer.

2017 **Investigating the energy impact of Android smells**, *SANER 2017*, by Antonin Carette, Mehdi Adel Ait Younes, Geoffrey Hecht, Naouel Moha, and Romain Rouvoy.

First author.

2016 **A Learning Algorithm for Change Impact Prediction: Experimentation on 7 Java Applications**, *RAISE 2016*, by Vincenzo Musco, Antonin Carette, Martin Monperrus, and Philippe Preux.

Second author.

Personal Skills

- As I worked a lot with both research teams and companies, I am able to **organize my time** and **communicate efficiently**.
- I am able to **work easily in team and lead a project**, through my involvement in open-source projects since I was a teenager.
- I have both **good computer handling and programming skills** which I acquired contributing to open-source projects, but also during my work experience.
- I have problem solving skills and I like to solve concrete and real-world problems.

IT Package

Engineering:

- I am proficient in using **Python** (>= 3.7), **Go**, **Rust**, and **C/C++**, which I used during many personal and professional projects.

- I like to debug my projects using LLDB or GDB when I can (for C/C++ projects), and use some profilers as soon as I can.
- I have knowledge of **Swift 5** / **SwiftUI** and the **Apple Metal 2** Graphics API for iOS, iPadOS, and macOS platforms, which I use to build my own game engine.
- I have knowledge of **OCaml** (functional paradigm only), which I studied during my first years at the University.
- I have the habit to take care of my projects from proof-of-concepts to production, including **Docker** containers deployment in cloud environments and **Gitlab CI/CD**.
- I have knowledge of message broker tools, like **RabbitMQ**.

Games:

- I use GameMaker Studio 2 and Pico-8 as much as possible to prototype my ideas.

Open-Source contributions

- **Python**: scikit-learn documentation, statsmodel.
- **Rust**: cargo-generate, Redox-OS, ar-OS (my own operating system written in Rust), the Rust compiler documentation.
- **Other**: FirefoxOS Powertool, SOMCA's Paprika tool, SOMCA's Naga Viper, Calabash.

Languages

French **Mothertongue**

English **Intermediate**

Personal Interests

- Video game (and video game "engineering")
- Photography
- Fencing