Florian Rival | Software engineer

B Florian.Rival@gmail.com • www.florianrival.com • 🔗 florianrival • 🌐 4ian

Experience

Facebook   **London, United Kingdom**

Enterprise Engineer   *04/2018 - Present*

Building applications for managing Facebook Data Centers.
- Development and improvements on existing tools using React.js, Hack (PHP).
- Built from scratch two new products using React.js, Hack (PHP) and C++.
- Evangelized Front-end engineering and React.js best practices in the teams working on Data Center products.
- Given talks at 3 international conferences, including React Conf, about React.js and WebAssembly (see Conferences section).

BAM   **Paris, France**

Software Engineer and Architect, Deputy CTO since mid-2017   *09/2015 - 03/2018*

Development of mobile applications, for iOS and Android, and backends.
- Development of cross-platform apps, mainly with **React Native** and React.js, Redux, Jest, Flowtype.
- Developed native (Java and Objective-C) modules for React Native and integrated Cordova into existing native apps.
- Development of the associated backends using **Node.js**, Spring Boot or Django, Redis, MySQL/PostgreSQL/Oracle.
- Heavy use of Lean and agile (Scrum) methodologies to drive all the projects.
- Conducted interviews for hiring new developers.
- Given talks at 2 international conferences about React Native (see Conferences section).

Gladeye (Internship)   **Auckland, New Zealand**

Fullstack Developer   *03/2015 - 07/2015*

Co-developed the backend of the Auckland International Airport mobile application (using **PHP** and **Laravel 5**) and took part in the development of the mobile application (hybrid application using **HTML5** and **Cordova**).
- Created the **internal logic** to watch changes in flights, serve and normalize data aggregated from different APIs, trigger push notifications.
- Created test suites (using **PHPUnit**) to cover most of the backend services.
- Coded a complete API explorer with **Node.js** and **React** to send requests to SOAP or REST APIs.
- Developed modules for the mobile application, in particular a **complete caching system** to speed up application rendering.

Theodo (Internship)   **Paris, France**

Agile (Scrum) Web Developer   *06/2014 - 09/2014*

Developed a new module and rewrote legacy parts of a *Social Media Monitoring* application using Backbone.js, Handlebars, Browserify, TDD with Karma, Grunt and Chai, Continuous Integration with Jenkins.

Skills

C++
11 years of experience through personal projects.
C++14, CMake, STL, Boost, TinyXml,
wxWidgets, Design patterns

JavaScript
Frontend: React, Angular, Redux, MobX, Jest, Flowtype and backend: Node.js, Express, Hapi, MongoDB, CouchDB, DynamoDB, Emscripten

Game design
Pixi.js, Cocos2d-JS, SFML, Box2D, understanding of game engine architectures and pathfinding algorithms

Mobile development
React Native, native modules in Java and Objective-C, Cordova, Fabric.io with Crashlytics, Fastlane (notions)

Analytics
Google Analytics, Keen.io, New Relic, Firebase Analytics

Other Frontend skills
styled-components, material-ui, Sass (notions), PWA (notions)

DevOps
Travis-CI, CircleCI, AppVeyor, AWS (S3, Lambda, EC2, SQS, Route 53), Jenkins (notions)

Other Backend skills
PHP (Laravel, Symfony (notions)), Java (Spring Boot, Hibernate, JUnit), Serverless.com

And also: GraphQL, TDD, Git, C, SQL, GLSL (notions), LaTeX, SOAP (notions), Django (notions), Stripe.com

I'm interested in: Serverless architectures, WebGL, Web components, beautiful algorithms, agile and lean approaches, any innovative project

Education

Ensimag (Superior National School of Applied Mathematics and Computer Science)   **Grenoble, France**
M.S. Computer Science - Information Systems Engineering specialization   *2012–2015*

Lycée Alain-René Lesage   **Vannes, France**
Preparatory courses (intensive study of mathematics and physics)   *2010–2012*

Languages

English (full professional proficiency) and **French** (mother tongue)

Personal projects

GDevelop..

A complete game making app requiring no coding skills that I've been developing since 2008. It can be used to create **HTML5** and **native** games for Windows, MacOS and Linux. Users can design their games using visual editors and create the logic of their games using an intuitive events system. It was developed in **C++** and **JavaScript**, the interface ported from wxWidgets to React, is **open-source** and available on GitHub.

– Designed the entire game engine and implemented both a **C++** and a **JavaScript** version of it using **SFML** and **Pixi.js**.
– Developed lots of features including a pathfinding engine, a complete platformer engine, support for particles, physics engine and dynamic lightning and implemented a powerful collision detection algorithm.
– Written a **code generator** and parsers that transpile the events into C++ or JavaScript.
– Setup translations using gettext and Crowdin.com, enabling the software to be translated into **6 languages** and the website into **9 languages**, thanks to its community.
– Created a **serverless architecture** (based on AWS lambda and S3) for offering services like a one-click Android/Windows/macOS/Linux packaging for games made with GDevelop.
– Developed the website using Gatsby.js and maintained the forum and the documentation.,
– GDevelop is downloaded **7000 times** each month, and the web based version **9000 times** each month.

Try it online on *editor.gdevelop-app.com* or visit GDevelop website on *gdevelop-app.com*

Lil BUB's HELLO EARTH...

"Hello Earth" is a retro 8-bit mobile video game featuring Lil BUB, an internet sensation cat. I've created the whole game engine and designed all levels, using GDevelop. The game features more than a dozen levels, alternating between platform and shooter levels.

– Created and adapted the game engine for iOS and Android using **Cocos2d-JS**.
– Developed versions for Windows, macOS and Linux using Electron and **Pixi.js**.
– Worked to have a demo ready for the **Kickstarter project**, which finally raised $148,003.

Talks/conferences/publications

– Given a talk about GDevelop at **HTML5 Game Jam Paris**, explaining how it can be used to quickly prototype games and at **Node.js Paris** and **WebAssembly Paris**, using it as an example of how to create a powerful webapp that is based on a native application written in C++.
– Given a talk "Bridges to React Native" at **React Native EU 2017** (Wroclaw) and **React Next 2017** (Tel Aviv).
– Reviewed **Building Your Application with React Native** and **Publishing your Application with React Native** video courses for Packt Publishing.
– Given talks at **React Boston 2018**, **React Conf 2018** and **React Next 2018** about WebAssembly and React.js: "Beyond Web-Apps: React and WebAssembly to Port Legacy Native Apps".

Various interests

I like: Sciences, Skiing, Party, Turing completeness, Climbing, French fries, Deus Ex, Gödel's incompleteness theorems, Tomb Raider, His Dark Materials, Horror movies, Lots of other video games, Going at the gym, Attending or speaking at conferences, Making lists of things

I've read: lots of computer science related books (*[More] Effective [Modern] C++*, *Exceptional C++*, *JavaScript: The Good Parts*, *Best of Game Programming Gems*, *Game Programming Patterns*, parts of *The Art Of Computer Programming*)