

Oscar Forner Martinez

I am a software engineer who likes challenges when I am working in a project, I really enjoy applying advanced algorithms and data structures to solve problems in an efficient and elegant way.

Education

- 2010-2013** **Bachelor of Engineering in Computer Science;** Universitat Jaume I (Spain)
Degree Thesis: Analysis of authentication radiofrequency systems and RFID. Mark gained: 95%
Advanced Data Structures, Compilers and Interpreters and Distributed Systems
- 2006-2010** **Associate Degree in Computer Science;** Universitat Jaume I (Spain)
Degree Thesis: Secure platform for advanced electronic signature. Mark gained: 92%
Operating Systems, Real Time Operating Systems and Embedded Systems

Experience

- 2015-Present** **Software Developer at Programming Research**
I have been working in a couple of projects during my time at Programming Research.
-Static analysis of code: Checks if the code has some patterns that have an *undefined behaviour, unspecified in the Standard, and/or implementation-defined*.
-Dataflow analysis of code: Checks the complexity of methods, pointer problems, memory handling, etc.
- 2013-2015** **Software Engineer at European Bioinformatics Institute**
One of my duties was to create a RESTful service to allow users to query our database to find information about multiprotein complexes.
In addition, I developed an algorithm to cluster biological information from different kinds of proteins.

Courses

- March 2016** **LFD320: Linux Kernel Internals and Debugging;** Linux Foundation
- August 2015** **Agile for developers;** Accelebrate
- November 2014** **Algorithms, Part II;** Coursera, Princeton University
- November 2014** **Algorithms: Design and Analysis, Part I;** Coursera Stanford University

September
2014

Algorithms, Part I; Coursera, Princeton University

Technical Experience

- Open Source** All my personal development is done using and for Open Source. All my collaboration with Open Source projects can be found in my **GitHub** account.
- Manjaro Linux** I collaborate with the development of the Manjaro Linux distribution. I took part in the development of the hardware detector to allow the user to install the right drivers.
- Prefix Tree** I created a project to compare the performance in different *Prefix Tree* such as **Trie**, **Ternary Search Tree** and **Radix Tree**. I used several cutting edge technologies like: C++11, Google Test (for unit test) and **Conan** (for dependencies manager).
- Linux Kernel** I have been studying the Linux Kernel from the beginning of 2015. First, I read books such as “*Understanding Linux Kernel*” and “*Linux Decide Drivers*”. Nowadays, I am taking the **Eudypatula Challenge**.
- Personal blog** I have a personal blog where I write about different topics I think people can be interested in. Usually, it is about new technologies and how to use them or tricks and tips I found out resourceful or important.
- Programming Languages** **C++:** I have been using C++ for several years in different projects and technologies. For multithreaded applications I used **Pthreads** and **OpenMP**, I had some experience with **MPI** for distributed systems. **C++11/14** to explore the new features included. **Boost** to have access to the *filesystem*, *networking*, *smart pointers* and *testing/mocking*. **Google Test** to use it as a unit test framework without big dependencies. **Conan** as a dependency manager. **CMake** to build projects. **GDB** for debugging applications. **Valgrind/Perf** to measure performance and find bottlenecks.
- C:** I used C for low level programming, such as **Linux Kernel Drivers** for Real Time Operating Systems **RTAI** and to create a new scheduler using the **Rate-Monotonic** algorithm. Moreover, I used C in **Embedded Systems** to create applications to control industrial systems using **Syscalls**.
- Good knowledge of: **Python** and **Bash** with scripting purposes.

Languages

- Spanish** Native
- English** Working knowledge

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