

# Ernesto Martínez García

## Curriculum Vitae

🏠 Alicante, Spain & Graz, Austria  
📞 removed (public CV)  
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### EDUCATION

OCT. 2022 –	<b>MSc Computer Science</b> Information Security Major Embedded Systems Minor <i>Graz University of Technology</i>	ENG
SEP. 2018 – JUN. 2022	<b>B.Eng. Computer Engineering</b> OVERALL: 8.98   15 COURSES W/ HONORS High Academic Performance Class <i>University of Alicante</i>	SPA ENG

### LANGUAGES

CERTIFIED<sup>1</sup>: English C1, Valencià C1  
NATIVE: Spanish  
LEARNING: German

<sup>1</sup>Certified European Framework of Reference for Languages Level

### TECHNICAL SKILLS

	<b>Programming Languages</b>
CONFIDENT WITH	C++, C
DONE PROJECTS WITH	Python, Java
WORKED WITH	Rust, bash, php, racket, ada, swift, etc.
	<b>Software Projects</b>
COLLABORATING	Git + GitHub, GitLab, etc.
BUILDING	make, cmake, autotools
VALIDATING	gdb, valgrind, sanitizers, xUnit, etc.
PROFILING	callgrind + kcachegrind, memusage, bloaty
DOCUMENTING	doxygen, javadoc, hugo, markdown, org
	<b>System Administration</b>
WORKSTATION	7 years using and tinkering GNU/Linux
SERVER	OpenBSD Home Server
NETWORKING	OpenWRT Home Router
TERMINAL INTERFACE	“Fluent”, a lot of experience
	<b>Academic &amp; Research</b>
WRITING	6 years using $\LaTeX$
REFERENCING	bibtex
PRESENTING	beamer

### BACHELOR THESIS

#### *alma: a toy kernel in C++ for x86\_64 machines*

Developed a x86\_64 toy kernel in C++ and a initial C bootloader for UEFI systems with the mere purpose of learning OS Development.

The kernel ships with different of low-level features such as basic ethernet capabilities, 4 Page Tables Virtual Memory, stivale2 boot protocol, PS/2 keyboard support, a custom VM build enviroment, and a 215 page long documentation. Everything functional in qemu and bare metal.

The project can be found at [github.com/ecomaikgolf/alma](https://github.com/ecomaikgolf/alma)

### ACADEMIC ACHIEVEMENTS

#### Bachelor Extraordinary Award

Award given by the University of Alicante and regional College of Computer Engineers to the best graduating students.

#### IAIK Information Security Scholarship

Scholarship given by the renowned TUGraz IAIK department to one or two prospective Information Security students based on academic achievements.

#### Bachelor Thesis passed with Honors

Received the maximum score for the bachelor thesis and the special “Honors” mention.

#### 15 Courses passed with Honors

Passed 15 courses, which include backbone subjects such as Maths I & II, Discrete Maths, Programming I & II, etc. with Honors. A total of 25% ECTS of the bachelor.

### INFORMATION SECURITY

#### Operating Systems

Keen interest in OS development and hardening.

#### Reverse Engineering

Curious about RE, obfuscation techniques and executable formats. Worked personally with IDA, radare2, apktool.

#### Exploiting

Taken exploiting related courses at TUGraz and side challenges. Keen interest in this topic with C/C++ related code.

#### Cryptography

Taking cryptography at TUGraz’s IAIK crypto course.

### PREVIOUS RESEARCH WORK

#### *High Perf. Computing and Parallelism*

As part of external practises, I worked with the director of the “High Performance Computing and Parallelism Group” from the University of Alicante.

Research consisted on secuential, OpenMPI and OpenMP versions of an algorithm for **low-dose scan CT medical image filtering** to remove the gaussian-impulsive noise result of radiation.

### SIDE PROJECTS

#### Vulnerability in University’s Virtual Campus

Stored XSS in the virtual campus webpage, bypass of two patches and a talk at the BitUp security conference.

#### University’s Library CLI Application

Developed with a team a CLI application for the university library in C++ with libcurl, then ported it to Rust.

#### Personal Technical Website

A selfhosted website where I write personal notes about technical stuff I find interesting.