Marco Maida

Computer scientist

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About me

I am a computer scientist currently pursuing a Ph.D. at Max Planck Institute for Software Systems.

I was born in Turin, Italy, and have been tinkering with computers for as long as I can remember. In 2013, I started working professionally as a programmer. After three years, I decided to start a bachelor degree in Computer Science, while I kept working part-time as game developer. Once I graduated, I moved to Kaiserslautern, Germany, and started a Joint Master and Ph.D program.

I completed my master courses and just published my first research paper.

Languages

L'**italiano** è la mia lingua madre,

I am fluent in **English**,

und ich spreche etwas **Deutsch**.

Extras

I love camping and traveling with my bike: I often do the two together • I usually risk it, if I believe I am right • Striving not to be the smartest person in the room • I play guitar and — less successfully — sing.

Skills

I have nine years of professional experience in writing code. I am fluent in writing **Python**, **C#**, **C++**, **C**, **Java**, **Rust** and **Coq** code. During my seven years in the **industry**, I learnt to work on big code bases in large and small teams.

Two years in **research** taught me how study complicated problems and then design, implement, evaluate, document, and finally present my solutions.

I am very **outgoing** and I **love working in teams**. Thanks to my experience in game development, I am used to collaborating with different professional figures (e.g., artists, designers, musicians) and I have an eye for **user experience**.

Education

since 2019 — **Ph.D. student** — Max Planck Institute for Software Systems
Real-time Systems group

since 2019 — **Master in Computer Science** — Technische Universität Kaiserslautern

2016-2019 — **Bachelor in Computer Science** — Università degli studi di Torino
(110/100 cum laude)

2015-2016 — **Game dev: Software Development** — Event Horizon School
Private school

Experience

since 2019 — **Computer Science Researcher.** — Max Planck Institute
I am currently working on Real-time Systems. My work is focused on timeliness certifications in safety-critical systems using formal verification (Coq) and on trace-based schedulability analysis on Linux.

2016-2019 — **Game developer.** — 34BigThings
I worked with Unity3D (C#) and Unreal Engine (C++) on single player and online multiplayer games shipped on Steam, PS4, XboxOne, Nintendo Switch, and mobiles. I developed gameplays, AIs, tools and UIs.

2016 — **Freelance Unity3D developer.** — Teoresi, Choralia, Maserati
I built an interactive visualization software and a learning game using Unity3D. I shipped on mobile devices and browsers.

2013-2016 — **Software engineer.** — R.O. srl
I worked as a developer using C, C++, C#, and SQL building solutions for glass processing factories. I covered many roles, including traveling to customers to sell, install, and teach our software.

Projects

2021 — **Poet - Automatic Proof Generation** — Max Planck institute
I developed a tool that computes trustworthy worst-case scenario response times of a system under analysis. Poet automatically produces machine-checked Coq proof scripts as evidence of correctness. An ongoing-work publication has been accepted at RTSS2021, a top-class conference for real-time systems.
(`https://people.mpi-sws.org/~bbb/papers/pdf/rtss21-wip.pdf`)

2018 — **Fast Mobile Cycle (FMC) Framework and Toolkit.** — 34BigThings
I developed a Unity3D framework make the creation of production-ready casual games extremely fast, paired by a Python toolkit to execute bulk operations on the FMC games. With FMC, I, an artist, and a designer developed ten production-ready games within a month.
(`www.github.com/34OpenThings`)

2017 — **Razer Chroma in Unreal Engine 4.** — 34BigThings
I developed a framework that handles light effects on Razer's Chroma hardware that are coherent to what is happening in the game. This system is still used today in every 34BigThings game.
(`www.youtube.com/watch?v=AihLBrJBufk&ab_channel=34BigThings`)