



Jorge Miralles Filippini

MSc. Computational Mechanics

About me

I am a software engineer with a master's degree in computational mechanics, focusing on applied mathematics, software development, and reinforcement learning. I have experience in PLC software development and have contributed to innovative automated production systems and AI-based robotics applications. I'm looking to transition into web development, leveraging my expertise to create robust, scalable web applications

Experience

Software & Systems Engineer

2023 - Present | ITQ GmbH, Munich, Germany

- Developed PLC software for a fully automated production station using TwinCAT.
- Conducted R&D in Reinforcement Learning applications for robotics.

Junior Software Engineer

2022 - 2023 | ITQ GmbH, Munich Germany

- Focused on R&D for novel Reinforcement Learning AI agents in simulation environments.
- Worked on transferring AI models from simulation to real-world robotic applications.
- Contributed to the development and testing of AI-based robotics solutions.

C++ Tutor

2021 - 2022 | TUM Chair of Computational Mechanics, Munich, Germany

- Taught Object-Oriented C++ to master's students.
- Provided guidance and feedback on programming assignments and projects.

Mechanical Engineering Experience

2018 - 2020 | UC3M's MotoStudent-Team, Madrid, Spain

- Performed FEM simulations and dynamic multibody analysis for a racing motorcycle.
- Designed new components for the motorcycle using CAD tools.

2018 | Deimos Space, Madrid, Spain

- Designed and simulated CubeSats (satellites) as part of the engineering team.
- Used FEM simulations to analyze the structural integrity of CubeSats.

Education

MSc. in Computational Mechanics

Technical University Munich, Germany | 2020 - 2022

- Focus on Applied Mathematics, Numerical Methods, Software Development and Computational Modeling & Simulation.

BEng. in Mechanical Engineering

Carlos III University of Madrid, Spain | 2016 - 2020

- Bilingual Bachelor: Spanish + English
- ERASMUS: TU Dresden (2019 - 2020)



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Munich, Germany



Nationality: Spanish / Swiss



www.linkedin.com/in/jomifi



portfolio link

Languages

Spanish: Native

English: Fluent

German: Proficient

Skills

- Front-End Web Development:
 - Experienced in React, Angular, TailwindCSS, HTML and CSS.
- Back-End Web Development:
 - Familiar in NodeJS, Express, MongoDB
- PLC Software Development:
 - Proficient with TwinCAT3, TwinCAT HMI
- Programming Languages:
 - Experienced in JavaScript, TypeScript, Python, C#, C++
- Version Control & Development Practices:
 - Experienced with Git, Scrum, Agile methodologies