Jorge Miralles Filippini

MSc. Computational Mechanics | Software Engineer

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Munich, Germany

Nationality: Spanish / Swiss

www.linkedin.com/in/jomifi

www.mfjorge.de

Languuages

Spanish: Native
English: Fluent
German: Proficient

Skills

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

About me

I am a skilled software engineer with a strong background in full-stack development, holding a master's degree in computational mechanics. My experience spans developing front-end and back-end systems, including building scalable web applications using Angular, Node.js, PostgreSQL, and InfluxDB. I have worked on projects that range from creating human-machine interfaces (HMI) for industrial automation to conducting R&D in AI-driven robotics.

Having contributed to end-to-end software development in an agile environment, I am now seeking to apply my expertise to web technology domains.

Experience

Software Engineer
2023 - Present | ITQ GmbH, Munich, Germany
- Fullstack development of an HMI for a production unit in the automotive industry.
  - TechStack:
    - Angular, NodeJs, PostgreSQL, InfluxDB, MQTT, Grafana.
- 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.

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| Madrid, Spain
- Performed FEM simulations and dynamic multibody analysis for a racing motorcycle
- Designed and simulated CubeSats (satellites) as part of the engineering team.

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 + Enlgish
- ERASMUS: TU Dresden (2019 - 2020)