CURRICULUM VITAE

Jaime Alonso Loaiza Delgado
Munich, Germany | MSc MRBE – Technical University of Munich (TUM)
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GitHub | Portfolio

Mechatronics engineer specializing in robotics, control systems, and biomechanical modeling. Industry experience in industrial sensor systems, CAD design, and Python-based data analysis tools. Background in ROS2, OpenSim, and simulation-driven engineering, with strong applied exposure to automation and robotics programming. Seeking a working student role to contribute to software, robotics, or biomechanical system development within a German technology company.

TECHNICAL SKILLS

C++ | Python | ROS2 | URDF | OpenSim | MATLAB/Simulink | KUKA KRL | PID control | State estimation | Time-series signal processing | SolidWorks / Inventor | Git / GitHub | Linux (WSL2)

PROFESSIONAL EXPERIENCE

Rheonics GmbH - Mechatronics Engineer **Aug 2024 – Present**

- Designed and detailed manufacturable 3D CAD models for industrial sensor mounting systems and process accessories.
- Developed internal Python-based tools for sensor data analysis, troubleshooting, and quotation automation.
- Provided technical support for industrial viscosity and density sensors, translating process conditions into correct hardware configurations.
- Authored technical application notes and troubleshooting documentation for industrial deployment.
- Delivered structured technical training to partners and internal engineering teams.

Andes Technology SAC - Applications Engineer **Dec 2020 - Aug 2024**

- Delivered 17 industrial automation and robotics proposals meeting full client technical specifications.
- Led rapid prototyping and proof-of-concept development to validate automation solutions.
- Programmed and integrated robotic systems (KUKA KRL) and supported mechanical/electrical assembly workflows.
- Conducted technical training in robotics programming, additive manufacturing, and system integration.

KTH Royal Institute of Technology - Research Intern **Dec 2021 - Mar 2022**

- Developed an OpenSim-based pipeline for muscle excitation analysis using the Rajagopal musculoskeletal model.
- Performed dynamically consistent inverse dynamics simulations for lower-limb biomechanics.
- Analyzed muscle activation patterns under constrained dynamic conditions.

Innovation Laboratory, Toulouse Lautrec - Laboratory Instructor **Mar 2023 – Dec 2025**

- Supervised multidisciplinary engineering projects (IoT, embedded systems, VR/AR, additive manufacturing).
- Guided structured product development and rapid prototyping workflows.
- Mentored student teams in hardware–software system integration.

PROJECTS

ROS2 Robotic System Development | C++, ROS2, URDF

- Implemented ROS2 publisher/subscriber and service nodes for modular robotic system simulation.
- Implemented structured package architecture and version control workflow (Git).

Musculoskeletal Simulation Pipeline | OpenSim, MATLAB

- Built analysis pipeline for muscle excitation using Rajagopal model.
- Performed inverse dynamics simulations under dynamically consistent constraints.

Industrial Data Analysis Tools | Python

- Developed internal tools for sensor data visualization and automated quotation support.

EDUCATION

MSc Mechatronics Robotics and Biomechanical Engineering (MRBE) **2026–Present**
Technical University of Munich (TUM)

BSc Mechatronics Engineering **2017–2021**
Universidad Peruana de Ciencias Aplicadas

- Graduated 2nd of class (17.1/20)
- Thesis: Adaptive robotic gripper for complex geometry manipulation

LANGUAGES

Spanish (Native) | English (C2 – IELTS 8.5) | German (A2) | French (A1)