



Crysthian Salvador Aboyte

Mechatronics Engineer

EDUCATION

Double Master's Degree in Mechatronics Engineering

Supported by the Erasmus+ program of the European Union.

Supmicrotech ENSMM - Besançon France

2024-2025

University of Oviedo - Gijón Spain

2023-2024

Acquisition and expertise in mechatronic design, modeling of mechatronic systems, multivariable control, control systems, and industrial automation. CAD design, 3D prototyping, mass production, and electronic design. Skills in signal processing, 2D vision, robotics, mobile robotics, vibrations, and acoustics. Experience in finite element analysis, project management, and database management.

Bachelor's Degree in Mechatronics Engineering

University of Sonora - Hermosillo Mexico

2017-2022

Master's Degree in Mechatronics Engineering

ENSIL-ENSCI Engineering School of Limoges- Limoges France

2021-2022

Fourth-year exchange program under the MEXFITEC agreement.

PROFESSIONAL EXPERIENCE

Automation & Control Intern

Framatome - Lyon, France

March 2025 - September 2025

Development of a Python-based automation gateway for the generation of complete projects in Control Expert (PLCs) and Panorama (SCADA) from SDT models using Jinja templates: . Technical documentation and tool evaluation on real industrial use cases.

Control & Assembly Engineer

CIP Sonora - Hermosillo, Mexico

December 2022 - September 2023

Conceiving, designing, and programming automated workstations integrating vision systems, HMIs, robotic equipment, and pneumatic systems. Developing custom technical solutions for the automotive industry. Testing and optimizing workstations before delivery, ensuring compliance and efficiency.

Mobile Robotics Internship

Glocal Robotics - Angoulême, France

May 2022 - September 2022

Gained in-depth understanding of the Thalamus robot, documented ROS message exchanges, and optimized the Thalamus management web application. Configured the robot's 2D cameras in ZoneMinder and implemented a VoIP client on a SIP server.

ACADEMIC PROJECTS

Industrial Robot Control Using a Stylus - ENSMM

Used the Intel RealSense depth camera to control a robot with a stylus, recognizing gestures, position, and orientation. Integrated real-time tracking and position data with a Universal Robot (UR) using OpenCV and Pyrealsense2 for precise control and interaction.

Development of a 3-DOF Anthropomorphic Robot - UNIOVI

Designed, fabricated, assembled, and programmed a 3-degree-of-freedom anthropomorphic robotic arm, integrating computer vision algorithms to autonomously play Tic Tac Toe.

3D Scanning System - UNIOVI

Designed, fabricated, and tested a 3D scanning system based on Apple's iPhone TrueDepth sensors, enabling the capture of point clouds through a Python interface for subsequent processing with Geomagic.

OTHER EXPERIENCES

- Performed 2D and 3D machining on a 3-axis CNC machine.
- Completed an 80-hour course on Allen Bradley and Festo PLCs, mastering Ladder, Instruction List, and Grafset programming languages.
- Analyzed and interpreted FMDS, R&R, and GD&T for assemblies.



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Mexican, Visa B1/B2 USA



26 years old



Languages

Spanish: Native

French: C1

English: B2



Computer Skills

PLCs

- Simatic step 7(Tia portal), Logo V6
- RSLogix 500, LogixPro
- Control Expert(Unit Pro)
- FST 4.10, VirtualPLC
- Panorama (IHM, SCADA)

Programming Languages

- Python, java, C/C++
- Pycharm, Git, VS Code

Robotics

- Software Cosimir , melfa basic IV
- ROS2
- Robot UR, Fanuc, Stäubli et Epson

CAD/CAM

- Solidworks, CAMworks
- 3D experience, Fusion 360, CREO
- Cimco edit 8
- Ultimaker cura, BCN3D stratos

Multiphysics Modeling

Simcenter, Amesim, Matlab, Simulink, Simscape

Microcontrollers

Arduino, AVR32, esp32



Soft Skills

Adaptability

Autonomy

Organizational skills

Availability

Versatility



Interests

- Sports (gym, volleyball, football, etc.)
- Reading (personal development)