Claudio Sebastian Cuenca Sarango

Braunschweig, Germany • linkedin.com/in/electrocoderEC • +49 15757962100 • sebastiancuenca1@gmail.com

Electronics and Software Engineer with over eight years of experience in embedded systems, industrial automation, and full-stack development for web, mobile, and desktop platforms. I have led research and development projects integrating IoT, Artificial Intelligence, Computer Vision, and *Virtual Reality to deliver innovative solutions across industrial and academic environments.*

PROFESSIONAL EXPERIENCE

DINELEC **Riobamba, Ecuador**
Industrial Automation and Control Engineer *August 2023 – July 2025*

- Developed and commissioned automation systems using Siemens TIA Portal, Simatic S7-1200/1500 PLCs, and WinCC SCADA, managing the full lifecycle from programming to on-site testing.
- Programmed and integrated industrial robots (KUKA, FESTO) into production lines, optimizing cycle times for assembly and pick-and-place tasks.
- Designed industrial electrical schematics using EPLAN and led the assembly and wiring of control panels, ensuring strict adherence to safety standards.
- Performed installation, configuration, and calibration of sensors and actuators, conducting independent error analysis and troubleshooting.
- Collaborated within multidisciplinary teams to implement automation standards, delivering technical documentation and training for maintenance staff.
- Optimized production lines by integrating industrial standard communication protocols. (Modbus, PROFINET, Ethernet/IP, MQTT)

SMARTELECTRONICS **Riobamba, Ecuador**
Embedded Systems Project Manager *January 2018 – February 2025*

- Planned and managed over 100 research and development projects, optimizing resource allocation and project schedules to ensure timely delivery.
- Developed and validated prototypes using microcontrollers, FPGAs, and embedded systems.
- Engineered embedded firmware (C/C++) for custom hardware, including updates and optimization for 3D printers and CNC machines.
- Designed autonomous mobile robots (differential drive) using ROS2, implementing SLAM, mapping, and localization algorithms for complex navigation tasks.
- Developed competitive robotics platforms (Robot Soccer, Sumo, Maze Solvers, Line Follower), applying advanced PID control and sensor fusion strategies.
- Integrated sensors, actuators, and IoT communication into real-world applications
- Implemented advanced control algorithms, AI solutions, and computer vision systems to automate critical processes.
- Developed 3D models and rapid prototyping using 3D printing and CNC milling, reducing prototype manufacturing time by 37% and reducing input errors.
- Designed intuitive UI/UX interfaces for desktop, web, and mobile applications, increasing operator efficiency by 45%.
- Developed scalable full-stack solutions using C/C++, Python, C#, Java, Kotlin, JavaScript and PHP.
- Integrated embedded systems with cross-platform software for industrial and academic applications.

ITCONTROL **Riobamba, Ecuador**
Technical Assistant *March 2017 – November 2017*

- Assisted in the installation of electronic security systems, including CCTV cameras, alarm systems, and access control systems.
- Supported configuration and testing of systems to ensure proper operation and troubleshoot issues during setup.
- Provided troubleshooting support and performed routine maintenance on security systems to ensure effective operation.

EDUCATION

ESCUELA SUPERIOR POLITÉCNICA DE CHIMBORAZO **Riobamba, Ecuador**
Bachelor's Degree in Electronics Engineering – Control Systems and Industrial Networks *December 2017*

Thesis: Design of a prototype electronic lock connected to a Wi-Fi network and controlled a mobile application for automatic door control in the laboratories of the Faculty of Engineering (FIE) building.

MMJ Smart Electronics **Lima, Perú**
Development of IoT Applications with AVR Microcontrollers and Node-RED *June 2023*

MMJ Smart Electronics **Lima, Perú**
Development of Electronic Devices with ALTIUM DESIGNER and IPC Standards *July 2024*

MMJ Smart Electronics
Specialization in SCADA and Industry 4.0 System Design with NI LabVIEW and IoT Protocols **Lima, Perú** *November 2024*

KEY SKILLS AND COMPETENCIES

Languages:

- **Spanish:** Native
- **English:** Proficient (B2)
- **German:** Intermediate (B1)

Technical Skills:

- **Electronic Design:** EAGLE PCB, Altium Designer, EasyEDA, KiCad, Proteus.
- **Software & Tools:** Arduino, MATLAB, Node-RED, Android Studio, TIA Portal, Unity, NI LabVIEW
- **Product Design and 3D Modeling:** Fusion 360, SolidWorks, Blender (engineering product development)

Professional Memberships:

Aldelta Technologies **Bogotá, Colombia**
IPC-A-610 *April 2022*

Certified in Acceptability of Electronic Assemblies.