Juan Felipe Rodriguez

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PROFESSIONAL SUMMARY

Control Systems Engineer with extensive experience supporting and optimizing equipment for radiopharmaceutical administration across North America. In my current role as a Controls Systems Software Engineer at Comecer, I serve as the final level of technical support to ensure the uninterrupted operation of critical equipment that manages short half-life radioactive isotopes, such as fluorine-18 (18F), gallium-68 (68Ga), technetium-99m (99mTc), lutetium-177 (177Lu), among others. Since these radiopharmaceuticals must be administered within FDA-approved timelines to maintain effectiveness, my work is crucial in preventing downtime and ensuring patients receive their treatments without delays.

I bring comprehensive experience with various control systems, including Siemens and Rockwell PLCs and HMIs, and other advanced platforms like B&R, ABB, Schneider, Emerson, Mitsubishi, Omron, and Yokogawa. I am also skilled in embedded systems and specialized controllers, integrating automated robotic systems into high-precision processes to ensure performance and safety in highly regulated environments.

My role involves real-time troubleshooting complex issues and applying automation expertise to maximize equipment availability and meet stringent regulatory standards. By minimizing downtime, I contribute directly to the continuity of cancer treatments, providing critical value to the supply chain of precision oncology medications.

WORK EXPERIENCE

COMECER INC   **Chiago, IL, US**
Control System Software Engineer   **Oct 2022-Currently**

- Provide technical support for critical radiopharmaceutical equipment, ensuring compliance with FDA regulations and minimizing downtime, essential for maintaining patient safety and treatment efficacy.
- Serve as the final level of support to prevent equipment failures that could disrupt the supply chain of life-saving radiopharmaceuticals, ensuring timely administration of treatments that directly contribute to saving patients' lives.
- Troubleshoot complex control systems, applying automation expertise to maximize equipment availability and efficiency, thus enhancing operational performance in highly regulated environments.
- Collaborate with cross-functional teams to enhance operational efficiency and support the supply chain of precision oncology medications, playing a critical role in the continuity of cancer treatments and ensuring clients receive their life-saving therapies.

Clyde's Donuts   **Addison, IL, US**

Control System Engineer   **Oct 2022-Currently**

- Orchestrated developing and implementing cutting-edge assembly machines, driving a remarkable 20% increase in production efficiency and slashing downtime by 15%.
- Led a cross-functional execution team to deliver flawless system control function and mechanical design, ensuring on-time and within-budget project completion with a 100% client satisfaction rate.
- Authored comprehensive operator manuals, streamlining training processes and catapulting operator productivity by 25% while reducing errors by 30%.
- Engineered seamless installation, startup, and debugging of systems, resulting in a 95% reduction in post-installation issues and an unparalleled client experience.

Skill: Studio500, RSLogix500, RSLogix5000, PX Developer, Step7, WinCC, Tia Portal V14-V16, FactoryTalk View Studio, GX Works3, RT ToolBox3 operation screen, SCADA Ignition, 1336 PLUS AB, Powerflex 40, Powerflex 520, Powerflex 750, MX2-V1 Omron, FR-D700 Mitsubishi, v1000 Yaskawa, 8200 vector Lenze, micromaster 440, C-more7, Panel View 700 & 1000 AB, Tp700 comfort Siemens,

Rana Meal Solutions   **Bartlett, IL, US**

Operations maintenance specialist   **Feb 2022 - Nov 2022**

- Implemented proactive preventive maintenance procedures, significantly reducing equipment downtime by an impressive 15% and enhancing overall equipment reliability.
- Expertly diagnosed and resolved intricate issues in mechanical, pneumatic, hydraulic, electrical, and control systems, driving a remarkable 20% surge in equipment efficiency.
- Spearheaded and executed transformative projects on automated manufacturing equipment, delivering an outstanding 30% enhancement in equipment performance and a substantial 10% reduction in production cycle time.
- Mentored and guided junior technicians, electrical personnel, and senior mechanics, providing them with vital technical skills and knowledge. This led to a remarkable 25% improvement in their effectiveness and efficiency in equipment maintenance and troubleshooting.

Freelancer   (Online)
Freelancer.com   **Jan 2021- Feb 2022**

- Led the end-to-end execution of 10+ electrical systems and software projects, overseeing project planning, resource allocation, and successful project completion within tight deadlines, meeting or exceeding client expectations.
- development of the MSP432 board with some technical specifications that the customer required for the mass production of racing drones.
- Multilayer PCB design, BMO, 3D rendering, and manufacturing steps in PDF from the msp432 launchpad development board in Altium electronic design software.
- Utilized expertise in industrial communication protocols (TCP/IP, USB, Ethernet, GPIB) to establish robust and reliable communication channels, facilitating real-time data acquisition and efficient troubleshooting, leading to a 30% decrease in equipment downtime.

Engineer Freelancer   (Online)
BOXMARK   **Oct 2019 – Mar 2020**

- Development of hardware and software with artificial intelligence technology of artificial intelligence, using patterns in the driving of vehicles to provide safety to the car, avoiding that they cannot be driven if they do not comply with the profiles configured in the system. It detected driver patterns that could put him or other drivers at risk, such as recognition of microsleeps, cell phone use while driving, concentration on the road, and unusual accelerations.
- Developed ML algorithms to analyze vast volumes of historical data to predict person profiles and provide access to specific car characteristics.
- Designed machine learning systems and self-running artificial intelligence (AI) software to automate predictive models.
- Managed infrastructure and data pipelines to bring codes to production.
- Converts unstructured data into useful information through image auto-tagging and text-to-speech conversion for driver profiling.
- Utilized data modeling and evaluation strategies to find patterns and predict unseen instances.
- Selected appropriate datasets and data representation methods.
- Compiled, cleaned, and manipulated data for proper handling.

Skill

Python, Matrix mathematics, TensorFlow, Torch, Google Cloud, Debian, Raspbian, Raspberry Pi, STM32F, IoT, Wi-Fi, SPI, CAN, UART, accelerometer, computer vision, OpenCV, matplotlib, pandas, NumPy, Scikit-learn.

Centuritech S.A.S   **Bogota, Colombia**

Software Development Consultant   **Oct 2019 – Mar 2020**

- Served as primary liaison between software customers and the development team, relating feedback and concerns for future patch cycles.
- Consulted with clients to align future software development with customer priorities.
- Orchestrated efficient large-scale software deployments.
- Reviewed project specifications and designed technology solutions that met or exceeded performance expectations.
- Designed presentations illustrating Bizagi and Tableau usage, translating highly technical language into easily understood graphics and text.
- Operated within cross-functional environments, coordinating multi-disciplinary teams to avoid redundancy and reduce dependencies.
- Performed software demonstrations for potential clients, highlighting the strengths of Robotic Process Automation (RPA).
- Proctored training via in-person and online venues for UiPath, Automation Anywhere, blueprism.
- Designed complete solution architecture tailored to specific end-user needs.
- Offered software-related technical support through various communications channels.
- Aided in Robotic Process Automation implementation for clients like the Colombian Stock Exchange, Terpel Oil and Gas, and Kantar IBOPE Media, providing setup, initial training services, and Software development.
- Installed and configured software applications and tested solutions for functionality.
- Collaborated with clients to define solution requirements, accounting for applicable development variables.
- Coordinated with other engineers to evaluate and improve software and hardware interfaces.
- Prepared detailed reports on updates to project specifications, progress, identified conflicts and team activities.
- Discussed project progress with customers, collected feedback on different stages and directly addressed concerns.
- Introduced agile methodologies and development best practices to division to enhance product development.
  Skill
  UiPath, Blue Prism and Automation Anywhere. Definition, design, development, application testing in business processes

Centuritech S.A.S   **Bogota, Colombia**
Senior Hardware Engineer   **Jan 2018 – Oct 2019**

- Design internal circuits to meet required factors such as electrical ratings and protections in accordance with AASM.
- Employed signal generators to detect and correct network and wiring faults in SPI, I2C, CAN and UART facilities.
- Incorporated risk management tasks such as failure mode and effects analysis (FMEA) and hazard and operability (HAZOP) studies.
- Resolved issues related to operational components for LAN, WAN and voice systems.
- Designed and implemented system security and data assurance.
- Used oscilloscopes, debuggers, spectrum analyzers and other tools to discern and correct faulty circuits and components.
- Used simulation software to test and correct deficits in proposed circuits and components without wasting physical assets.
- Performed PCB circuit design, optimizing proposed boards for situational requirements such as weight, space restrictions and location of external inputs.
- Built and maintained network infrastructure consisting of Windows, Linux and virtual products.
- Installed, configured, tested and maintained operating systems, application software and system management tools.
- Wrote and maintained custom scripts to increase system efficiency and performance time.
- Managed and monitored installed systems for highest level of availability.
- Monitored and tested application performance to identify potential bottlenecks, develop solutions, and collaborate with developers on solution implementation.
- Oversaw development and maintenance of organization computer systems and intranet.
- Participated in system development life cycle from requirements analysis through system implementation.

Skill

Python, C++, Altium designer, Proteus, OrCAD, KiCad, ADC RHS2116, ADS 1299, CortexM3 ARM, STM32F, BCM2711, Raspberry Pi 3, Raspbian, Linux

Centuritech   **Bogota, Colombia**
Junior Embedded Hardware Developer   **Aug 2016- Jan 2018**

- Used oscilloscopes, debuggers, spectrum analyzers and other tools to discern and correct faulty circuits and components.
- Performed PCB circuit design, optimizing proposed boards for situational requirements such as weight, space restrictions and location of external inputs.
- Design internal circuits to meet required factors such as electrical ratings and protections in accordance with AASM.
- Used simulation software to test and correct deficits in proposed circuits and components without wasting physical assets.
- Created circuitry and devices within specific compliance and compatibility frameworks for integration into existing systems.
- Integrated product development lifecycle considerations into designing embedded circuity and devices.
- Complied with internal and regulatory guidelines relating to electrical safety and risk mitigation during live circuit operations.
- Translated broad spectrum project requirements to detailed hardware architecture design concepts.
- Outlined design requirements, BOMs, functional specifications and reports to document development processes.
- Investigated hardware product issues involving materials and software and devised solutions.
- Conducted training sessions for partners, stakeholders and support teams to educate personnel on operational requirements.
- Drove implementation of quality requirements for new product designs and adherence to customer specifications and production requirements.

Skill

SPI, I2C, CAN, UART, Bluetooth 5.0, LAN, IoT, Altium Designer, Python, C++, C#, LVDS, RHS2116, ADC 1299, Raspberry Pi Zero W, Raspbian, Debian, SSH, VPN, EEG, ECG, EOG, EMG, PSG.

Centuritech, Bogota, Colombia
Software Development Engineer in Test   **Jan 2015 – Aug 2016**

- Wrote and optimized test cases to maximize the success of manual software testing with consistent, thorough approaches.
- Conducted regression testing, analyzed results, and submitted observations to the development team.
- Monitored debugging process results and investigated causes of non-conforming software.
- Implemented the use of UML diagrams with Bizagi and Tableau tools to illustrate project features and requirements.

Skill
Bizagi, jQuery, C#, C++, Apache server, Xampp, LAMP, MySQL, PHP, JSON

Centuritech, Bogota, Colombia
Technical Support   Jan 2013 – Jan 2015

- Resolved diverse technical issues across multiple systems and applications for customers and end-users across various time zones.
- Provided Tier 1 IT support to non-technical internal users through desk-side support services.
- Installation of VPN and firewalls with DNS, TCP/IP, SSH, and FTP protocols in applications and security devices and suggestion of additional security measures.
- Provided support for networking protocols and characteristics.
- Documented transactions and support interactions in the system for future reference and addition to the knowledge base.

Skill
* VPN, CRM, CTP/IP, FTP, SSH, CentOS, Ubuntu, VM, IVR, VOIP, C# and C++.

EDUCATION

European Business University of Barcelona

MBA in business administration
Aug 2025

Military University Nueva Granada

Mechatronic Engineer
Sep 2018

SKILLS & CERTIFICATES

Softs Skills: Team player, Sociable, Attention to detail, Analytical mindset, and Results-driven attitude

Hard Skills: digital, RF, and power supply circuitry; Ability to identify critical design requirements; PCB layout; knowledge of applicable industry standards (IEEE, Telcordia, ANSI), programmable logic (FPGA/CPLD) design and implementation, Altium Designer, MATLAB, robot Studio, roboDK, RT ToolBox3 in SolidWorks, Cognex 2800 Vision System.

Certification: Siemens PLC programming in TIA PORTAL, Studio 5000 & RS Logix 500, Data Analysis with Python, Machine Learning Whit Big Data, Automation anywhere certified advanced, Google Cloud Big Data and Machine Learning Fundamentals