Karla Juanita Baron Hurtado
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Languages: Native Spanish, English C1, German A2

Professional Profile:

With a background in Mechatronics and Biomedical Engineering, I have developed a diverse skill set that enables me to effectively tackle complex problems. I have extensive experience in programming languages such as Python, Java, C++, and HTML/CSS, as well as in SQL, NoSQL databases, and Power BI for data management and analysis.

I have hands-on experience with PLC systems and have designed, implemented, and optimized various automation systems. My work includes real-time applications, sensor integration, robotics, and control systems, delivering reliable and efficient solutions tailored to each company's specific needs. I thrive in high-pressure environments, bringing strong problem-solving skills, adaptability, and technical expertise to turn challenges into opportunities for growth and success.

Education:

Mechatronics Engineering – Universidad Militar Nueva Granada – Undergraduate

Specialized in combining mechanical, electrical, and software systems to develop innovative engineering solutions, focusing on automation and control systems.

Biomedical Engineering – Universidad Militar Nueva Granada (currently in 9th semester)

Focused on the design and improvement of medical devices and systems, integrating electronics and control systems for healthcare applications.

High School Diploma – Agustiniano Tagaste, Bogotá – Graduated in 2018

Training in science and technology with emphasis on mathematics, physics, and problem-solving.

Professional Experience:

2025 – Backend Developer Junior – Coink – CURRENT

- Develop the logic to process user requests, validate data, manage errors, and execute internal processes.
- Optimize queries and ensure data integrity.
- Create RESTful or GraphQL services for frontend or mobile applications to communicate with the database.

2024 – Telemedicine and Home Hospitalization Network – Hospital Militar

- Designed, developed, and implemented a WAN for telemedicine and home care services, facilitating remote patient care.
- Programmed communication protocols for secure data transmission, ensuring patient privacy and reliable medical data exchange.
- Conducted extensive testing and network optimization, ensuring scalability for future expansions.

2023 – Wireless Body Sensor Network for Home Hospitalization – Military Hospital, Military University

- Design a Wireless Body Sensor Network for home hospitalization.
- Development carried out with the support of the simulation laboratories of the Military Hospital.

2023 – Operations Engineer – Ágiles Dream Team

- Led the selection, programming, and commissioning of sensors for an automation project in the agricultural sector.
- Optimized sensor data integration with automated systems to improve productivity and real-time responsiveness to environmental changes.
- Coordinated interdisciplinary teams to meet project deadlines and ensure delivery of high-quality solutions.

Technical Skills:

Programming Languages: Python, Java, C++, C **Databases:** SQL, NoSQL **Web Development:** HTML, CSS **Software & Design Tools:** Power BI, SolidWorks, Revit **PLC Programming:** Siemens, Yaskawa **Robotics:** Project development on GitHub **Systems:** Control, Electronics, and Automation

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Areas of Expertise:

Mechatronics and Biomedical Engineering: Integration of mechanical, electrical, and software systems.
Automation and Control: PLC programming and optimization to improve operational efficiency.
Data Analysis and Statistical Projects: Real-time data processing and analysis for decision-making.
Real-Time Applications and Sensor Integration: Design of automated systems with sensor integration.
Robotics and Electronic Systems: Development of robotics solutions and hardware-software integration.