JUAN DAVID ABRIL BOHÓRQUEZ –
juanchoabril@gmail.com   +57 314 2131510
Data Analyst – PhD in Mechatronics and Robotic Systems
GitHub: https://github.com/juandabril
LinkedIn: https://www.linkedin.com/in/juan-david-abril-bohorquez/

Experienced system integrator with proven track record of leading research and development (R&D) processes. My undergo focuses on the design, analysis, and implementation of advanced electronic systems for data management.

My skills include automation, electrical drawings, project execution, Robot/PLC programming, and software development. I also excel in analytics for robotics and extended reality (XR), capture physiology signals, motion, and performance in the fields of control, industrial sectors, and Artificial Intelligence (AI). I'm a passionate team player committed to contributing to interdisciplinary healthcare design and ongoing learning through active involvement in research. In addition, I hold a valid US B1/B2 visa.

RELEVANT SKILLS

Category	Tools and Competence
Languages and Frameworks	**Python**, C#, MATLAB, LabVIEW, JS, Node.js, Selenium) **5+ years**
3D Design	SolidWorks, AutoCAD, Finite Element Analysis (FEA) **3+ years**
Data Analysis	GIS analysis, , QGIS, Pandas, NumPy, PySpark, SQL **5+ years**
Artificial Intelligence (AI) and Data Science (DS):	Scikit-Learn, TensorFlow, PyTorch **5+ years** Data Manipulation and Comprehensive AI Assessments, Statistics
Web Development	**HTML, Fast API, React 16.8+ 3+ years**
Cloud (AWS Expert)	Storage, Database, Amazon SageMaker, Azure and GCP capable.
Project Management	**Lean UX – Agile, Jira, Research Publications**.
Leadership	Coordinate teams, mentor, present, and write effectively.
Certifications	**Lean UX, Research Methods, Development Project Management**

EXPERIENCE: Software Developer

1. ***Technology Assessments for Telemetry on Web Platforms – Full Time:*** *ACTUALLLY*
- API for Explicit Content Detection in Lyrics excluding hate language (English and Spanish).
-Develop of a RESTful API with OpenAI and Fast API for Q/A in Chat GPT AI.
-Query financial and profile data from PDF files (test concept).
-News analysis and movie reviews on web portals based on Large Language Model (LLM).
-Development of a web browser extension based on USB/Bluetooth interfaces.

2. ***UCamp Utel Mexico - Employment Type: Part-time (Remote)*** *3-22-23 TO 11-22-23*
Data Science and AI Specialist: (with Mexican Residence Card and Work Permit):
-Mentoring in "Data Science and AI with Python and Google Colab".
-Guide in building Machine Learning solutions, covering data preprocessing, model selection, neural networks, NLP, and advanced model evaluation.
-Teach Scikit-learn, PyTorch, TensorFlow and Keras based on Logic Programming Rules for groups of people using e-learning strategies in an EdTech platform.

EXPERIENCE: Machine Learning Engineer

3. ***University of Massachusetts Lowell***   *6-06-22 TO 6-12-22*
Staff Researcher: -Development of an AI algorithm for the rehabilitation of neurological injuries through biometric analysis.
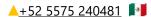-Evaluation of AI models for the prediction of motor/cognitive fatigue.

4. ***Universidad Militar Nueva Granada***   *7-01-17 TO 2-02-20*
Research Staff Member: -Evaluation of AI models for stress prediction from physiological characteristics and analysis of VR video games.
-3D design, mechanical and electronic assembly of a Hybrid Mobile Robot with Rocker-Bogie suspension with 3 degrees of freedom.
-Development of a "serious game" in VR with a physiological and biomechanical analyzer.
I worked in projects: impact on stabilometric therapies through a virtual reality session (2018-2019), also in both design and construction of a robotic platform for demining purposes in Colombia (2017). I designed DAQ systems for fan speed automation, magnetic levitation, and heat process supervision, diagrams and PID controllers based on LabVIEW.

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EXPERIENCE: Industrial Automation Engineer

5. *Ingautin de Colombia. Rockwell Automation Integrator* 12-21-2015 TO 6-6-2017

Projects Engineer: Contribution to automation, supervision of industrial processes and design, testing and installation of electrical control panels.

Integration with electro-pneumatic sensors, hydraulic actuators, PLC configuration, HDMIs and AC/DC controllers. Network configuration and remote access support using Ethernet, RS-232, RS-485, Remote I/O, VLAN and VNC.

EDUCATION / PUBLICATIONS

1. PhD. Engineering of Robotics and Mechatronics Systems Instituto Politécnico Nacional

2. MSc. on Mechatronics - Universidad Militar Nueva Granada

3. bachelor's degree in Mechatronics Engineering - Universidad Militar Nueva Granada

Google Scholar: https://scholar.google.com/citations?user=JQe3PjwAAAAJ&hl

ORCID ID: https://orcid.org/0000-0002-8239-2743 , **order by** most cited:

1. Serious Game Design of Virtual Reality Balance Rehabilitation with a Record of Psychophysiological Variables and Emotional Assessment **(year 2020)**.

2. Contribution of virtual environments to the perception of balance rehabilitation tasks: a psychophysiological study **(2019)**.

3. Prototyping interactive multimodal VR epidural administration **(2019)**.

4. Driver assistance system for people with reduced mobility in upper limb through electromyography signals **(2019)**.

5. Two DoF robotic platform for balance rehabilitation tasks **(2021)**.

ACHIEVEMENTS – CERTIFICATIONS

Certification	Achievements (Diploma Linked)
Scholarship	Fully funded PhD (México), and extra-stipend stay in U. Massachusetts Lowell (USA)
Languages	EF Standard English Test (EF SET) EF Standard English Test (EF SET) Issued Aug 2023
Technology	AWS: Computing, Storage and Database ID 327a523c-ab73-4afc-a3bc-a74387
Data Analysis	Google Data Analytics Certificate: Issued Jun 2023 Credential ID GEEX6ZSRP8SX
UX Design	Curso de Lean UX: Issued Apr 2023 ID 2c9f162e-8e34-467a-b3ab-2e33a53b75b6
Research	Understanding Research Methods: Issued Apr 2023 Credential ID CZ2L2SREVSQE
Management	Project Management B&M

TOOLS AND APTITUDES

Programming Languages	C#, Java, Python, SQL, LabVIEW, MATLAB, Java Script
Frameworks and Development Tools	Docker, Fast API, Git, Selenium, Unit Testing, Visual Studio Code
Web Technologies	HTML, Network Switches
Artificial Intelligence (AI) and Data Science (DS):	Artificial Intelligence (AI), Biomarkers, Computer Science/Data Science, Machine Learning (ML), Natural Language Processing (NPL), Signal Processing, Virtual Reality (VR), Extended Reality (XR)
Designs and Simulating	Computer-Aided Design (CAD)/CAM, Inventor, SolidWorks
Control and Automation Systems	DAQ's, Ladder, Programmable Logic Controller (PLC), rslogix500/5000, Factory Talk View, Allen-Bradley, TIA portal Siemens, EPLAN
Skills	Development, Power Query, Technical Leadership, Trend Analysis, Workbench, studio5000, AutoCAD, Power BI, Tableau, Alteryx, Power Apps, Unity, VMware, DWService, MySQL

INTERESTS

1. *Research and development (R&D)*   2. *Healthcare*   3. *Automotive industry*
4. *Renewable energy*   5. *Software (SaaS)*

LANGUAGES

English Upper intermediate C1 iTEP Certified, equiv.to a 100 TOEFL IBT. Spanish Native. German Basic.

Locations: México, Colombia   ⚠ +57 314 2131510   ⚠+52 5575 240481