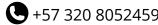
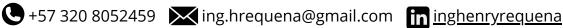
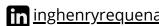
Henry **Requena**







Skills

Backend Development | Python • Java • Node|S

DevOps | Azure Devops • Pipelines • Docker • GitHub • SonarQube • UnitTests Data Science | SQL • Pandas • NumPy • Scikit-learn • Matplotlib • Tableau AI | LLM Models • Computer Vision • Machine Learning • Speech Recognition **Hardware** | Nvidia Jetson Nano • CUDA GPUs • Raspberry Pi • Arduino • ESP32 Cloud | Azure Functions • Azure AI • ML Studio • GCP • Vertex AI • Dialog Flow

Experience

NTT DATA Colombia | Python, OpenAI, Azure Functions, Document Intelligence Engineer | September 2024 - Present

<u>Document Reading and Interpretation Projects - Client: Sura</u>

- Client Definitions
- Creation of PoCs
- Use of Azure Durable Functions (Orchestration, Activities, Triggers)
- Data Processing and Validation
- Integration of Artificial Intelligence (Azure OpenAI)
- Data Extraction with OCR (Azure Document Intelligence)
- **Error and Exception Handling**
- Technical Documentation
- Database Management
- Unit Testing (Pytest SonarQube Coverage)
- · Training and Knowledge Transfer
- Version Control in Azure DevOps
- Pipeline Deployment
- **Production Deployment**

Consulting in AI and IoT | Python, GCP, Docker, MongoDB, Computer Vision

Project Engineer | December 2022 - September 2024

Main Responsibilities

- Analysis of issues and evaluation of possible solutions.
- · Detailed engineering and cost estimation.
- Construction of activity schedules with task delegation to the work team.
- Presentation of proposals to the client.
- Direct communication with the client during project development.
- Contact with non-Spanish-speaking suppliers (Siemens, Honeywell).

Gas Meter Calibration System for Analog and Digital Meters with Computer Vision

- Designing a new strategy for number detection on gas meters to optimize calibration times by directly reading the volume on the display.
- Training a detection model with YoloV5.
- Developing software for image capture and current volume prediction of the meter (OpenCV, Pytorch, NumPy, Flask).
- Functions for writing volume to the control system with Siemens PLC.

Monitoring and Data Processing Software in Automated Plant

- Reading states and measurements of transmitters, motors, proportional valves, and switches (JavaScript).
- Storing states and measurements in a database (MongoDB).
- Calculating KPIs based on instrument states.
- Generating monthly maintenance reports (Tibco Jaspersoft).

GIIM Group Universidad Autónoma del Caribe | Android, Java, OpenCV, Robotica

Senior Research Group Member | August 2022 - March 2024

Android Application for Intelligent Distribution Robot Control

• Designing an application in Android Studio to control a robot that distributes objects anywhere, with movement control and automatic activation to predetermined areas.

3D Printing Error Monitoring and Detection System with Computer Vision

- Developing a complete software implemented on a Raspberry Pi 4 with Ubuntu Server. Responsible for detecting 3D printing errors, sending alerts and temperatures to a graphical interface, and controlling the 3D printer from anywhere in the world (Python, OpenCV, VueJS, IoT, CNC).
- Training a YoloV8 model using an error dataset I created.
- Configuring a Flask server and setting up software as a service on Ubuntu (Linux Server).
- Designing functions to control the machine with serial commands.
- Installing a graphical interface in the cloud (Google Cloud Platform).

Education

Instituto Tecnológico y de **Estudios Superiores de Monterrey**

M.S., Applied Artificial Intelligence In Progress | Virtual Modality

Universidad Autónoma del Caribe

B.S., Mechatronics Engineering March 2024 | Barranquilla, Colombia GPA: 4.5/5.0

Certifications

Microsoft | Azure Data Scientist Associate (2024/2025)

Microsoft | Al Fundamentals (2024/2025)

Honors and Awards

Hackathon Barranqui-IA | First Place Winner | Google Dev. Group 2024, Barranquilla

Engineering Faculty Graduation Ceremony |

Meritorious Thesis | Universidad Autónoma del Caribe | 2024, Barranquilla

Engineering Faculty Graduation Ceremony |

First Honors for Highest GPA | Universidad Autónoma del Caribe | 2024, Barranquilla

Scientific Publications

MDPI - Engineering Proceedings | Remote Control Device for the Detection and Correction of Errors in the FDM 3D Printing Process in Real Time

Lima, Peru, November 2023

Courses

IBM Cognitive Class:

- Data Analysis Using Python
- **Data Science Tools**
- Getting Started with Enterprise Data Science

University of Michigan:

- Applied Machine Learning with Python
- Introduction to Data Science with Python

Udemy Business:

- Master Generative Al
- Microsoft Azure Functions Serverless Solutions

NTT DATA University:

- Introduction to DevOps
- · Introduction to GIT
- Introduction to Secure Development
- **Security Training**
- Privacy of Business

Tec de Monterrey:

- Data Science and Analytics
- Data Visualization
- Al and Advanced Analytics

Languages

Spanish - Native English - Advanced Portuguese - Basic

Interests

Travel • Food • Trombone Musician • Martial Arts • Personal Growth