



# Henry Jose Requena Molina

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**About me:**  
In the last 3 years, I have dedicated myself to various applications of Mechatronic Engineering, starting independently as a 3D designer and manufacturing parts through 3D printing. Later, as part of a research seedbed, I became a Senior Researcher with the registration of prototypes and software with the Ministry of Sciences of Colombia. Finally, keeping up with the latest trends in engineering, I have worked as a professional in the application of techniques for IoT, Machine Learning, and Computer Vision.

## EDUCATION AND TRAINING

2019 – 2024 – Barranquilla, Colombia  
**MECHATRONIC ENGINEER** – Universidad Autónoma del Caribe

## WORK EXPERIENCE

December 1, 2022 – Present – Barranquilla, Colombia  
**Software Developer - Freelance**

- Application of techniques for IoT (Node.js, Google Cloud Platform, MQTT Protocol, Influxdb, Grafana, Docker).
- Management of Linux Servers (Centos, Alma, Rocky).
- Use of NoSQL databases (MongoDB).
- Object detection with pre-trained models, OpenCV, and OCR application (Tensorflow, Tesseract, YoloV5, YoloV7).
- Analysis of control systems.
- Development of metrology software for the calibration of gas meters.

January 10, 2021 – Present – Barranquilla, Colombia  
**3D Design and Manufacturing - Freelance**

- Design of mechanisms and 3D printing for prototyping.
- Casings for electronic devices.
- Repair and maintenance of 3D printers.

## RESEARCH EXPERIENCE

June 1, 2022 – Present – Barranquilla, Colombia  
**Senior Researcher** – Universidad Autónoma del Caribe

- Design and Manufacturing of Functional Devices.
- (1) Software registration for flexible manufacturing process machines.
- (3) Software registrations for mechatronic devices.
- (2) Software and Prototype registrations for Computer Vision.
- Presentation at the III International Congress on Technology and Innovation in Engineering and Computing – CIITIC 2023.
- Article registered and awaiting approval for publication in MDPI-Engineering Proceedings.

## Languages

Native Language : Spanish  
Other Language : English

## Skills

Python	JavaScript	Google Cloud Platform	Linux Server	OpenCV	Nvidia Jetson Nano
MongoDB	Machine Learning	MQTT	Android Studio	Flask	WSGI
Docker	Grafana	InfluxDB	IoT	Pytorch	Solidworks
Java	TensorFlow	Yolo Models	Computer Vision	Pandas	Scikit Learn