

Juan Felipe JARAMILLO HERNÁNDEZ, M.Sc.

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Machine Learning Engineer with expertise in deploying ML models, optimizing pipelines, and automating workflows. Passionate about bridging the gap between research and production.

EDUCATION

January 2016
March 2022

Pontificia Universidad Javeriana, PUJ, Bogotá, Colombia

- > **Bachelor's Degree in Electronic Engineering** : Graduated with a cumulative GPA of 4.2 (on a scale of 0.0 to 5.0). My journey at PUJ was more than just academics — it was an amazing experience of circuits, signals, creativity, and curiosity.
- > **Thesis** : I discovered my passion for image processing, proposing an innovative method for deep learning-based super-resolution of plenoptic images of plants, within the framework of the In-silico Multiscale Optimization of Sustainable Agricultural Crops (ÓMICAS) research program.
- > See my digital badge : View [Certificate](#)

[Electronic Engineer](#) [CDIO Enthusiast](#) [Signal Processing](#) [Image Processing](#) [Computer Vision Dreamer](#)

September 2022
September 2023

Universitat Politècnica de València, UPV, Valencia, Spain

- > **Master's Degree in Artificial Intelligence, Pattern Recognition, and Digital Image Processing** : Graduated with a cumulative GPA of 8.9 (on a scale of 0.0 to 10.0). During my education at the UPV, I specialized in advanced machine learning algorithms for computer vision (CV), automatic speech recognition (ASR), and natural language processing (NLP).
- > **Thesis** : I proposed a novel artificial vision method for object detection by integrating depth estimation into the same architecture, deployed in real-time systems. Explore it [Here](#).
- > Check out my title here : View [Certificate](#) with the code ALUX0W631LT

[Artificial Intelligence Engineer](#) [Deep Learning](#) [Computer Vision](#) [Natural Language Processing](#)

EXPERIENCE

March 2017
December 2019

Robotics and Automation Society (RAS) | IEE, PUJ, Bogotá, Colombia

- > Design, implementation and programming of Sumo-Robots. Engineering of involved electronics (**sensors, actuators, and microcontrollers**).
- > Participation in the Runibot 2018 tournament.

[Robots](#) [Sumo-Robot](#) [Student Group](#)

July 2020
December 2020

University Social Internship, PUJ, Bogotá, Colombia

- > **Social responsibility** as an engineer for the society.
- > Developed and delivered multimedia programming tutorials to underprivileged youth, impacting **50+ students**.
- > Leveraged Scratch to teach fundamental programming concepts, fostering **digital literacy** in the community.

[Engineering for Society](#) [Programming](#) [Scratch](#)

March 2020
May 2021

Researcher, ÓMICAS, Bogotá, Colombia

- > Investigated sustainable agricultural practices through multiscale optimization, contributing to the advancement of the macro-project 4 of ÓMICAS.
- > Curated a novel dataset of plant light fields, pioneering research in light field **agricultural imaging**.
- > Developed and evaluated a spatial super-resolution model, enhancing image quality for **precision agriculture**.

[Research](#) [Precision Farming](#) [Light Fields](#) [Super-resolution](#) [Deep Learning](#) [Computer Vision](#)

July 2021	Intern - Technology Consulting, Digital & Emerging Technologies, ERNST & YOUNG, Bogotá, Colombia
December 2021	<ul style="list-style-type: none"> > Automated internal client processes, streamlining operations and reducing manual effort by 30% using RPA. > Design and implement APIs for a blockchain-based traceability solution, enhancing data integrity and transparency. > Conceptualized a multimodal platform using computer vision and machine learning, optimizing logistics and stock distribution for physical stores.

Consulting Emerging Technologies Blockchain

PUBLICATIONS AND APPEARANCES

January 2024	Jaramillo-Hernández, Juan Felipe, Vicente Julian, Cedric Marco-Detchart, and Jaime Andrés Rincón. 2024. "Application of Machine Vision Techniques in Low-Cost Devices to Improve Efficiency in Precision Farming" Sensors 24, no. 3 : 937. https://doi.org/10.3390/s24030937
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Computer Vision Object Detection Depth Estimation Precision Agriculture

SKILLS

Machine Learning	Scikit-Learn, PyTorch, TensorFlow, OpenCV, NLTK, Hugging Face
DevOps	Docker, Git, Slack, GitHub Actions
Programming	Python, C/C++, C#, SQL, Rust, Bash
Cloud Services	Google Cloud, AWS
Tools	GitHub, Jupyter, VS Code, Altium Designer, OrCAD
Platforms	Arduino, Raspberry Pi
Languages	English (C2), Spanish (native)

CERTIFICATIONS

March 2024	<p>Prepare for the Google Cloud Professional Machine Learning Engineer Certification, LINKEDIN LEARNING</p> <ul style="list-style-type: none"> > Google Cloud Professional Machine Learning Engineer Cert Prep : 1 Framing ML Problems. > Google Cloud Professional Machine Learning Engineer Cert Prep : 2 Architecting ML Solution. > Google Cloud Professional Machine Learning Engineer Cert Prep : 3 Designing Data Preparation and Processing Systems. > Google Cloud Professional Machine Learning Engineer Cert Prep : 4 Developing ML Models. > Google Cloud Professional Machine Learning Engineer Cert Prep : 5 Automating and Orchestrating ML Pipelines. > Google Cloud Professional Machine Learning Engineer Cert Prep : 6 Monitoring, Optimizing, and Maintaining ML Solutions. > View Certificate.
	<p>Data Processing Machine Learning Solution Architecture Data Preparation Artificial Intelligence (AI) Computer Vision</p> <p>Google Cloud Platform (GCP) DevOps MLOps</p>
March 2024	<p>Career Essentials in Generative AI by Microsoft and LinkedIn, MICROSOFT</p> <ul style="list-style-type: none"> > What Is Generative AI? > Generative AI : The Evolution of Thoughtful Online Search. > Streamlining Your Work with Microsoft Copilot. > Learning Microsoft 365 Copilot. > Ethics in the Age of Generative AI. > Introduction to Artificial Intelligence. > View Certificate.
	<p>Computer Ethics Productivity Improvement Natural Language Processing (NLP) Generative AI</p> <p>Search Engine Technology Artificial Intelligence for Business Microsoft 365 Artificial Intelligence (AI)</p>

April 2024	Prepare for the Microsoft Azure AI Fundamentals (AI-900) Certification, LINKEDIN LEARNING <ul style="list-style-type: none"> > Microsoft Azure AI Fundamentals (AI-900) Exam Tips. > Azure AI Fundamentals (AI-900) Cert Prep : 1 Conversational AI on Azure. > Azure AI Fundamentals (AI-900) Cert Prep : 2 Principles of Machine Learning on Azure. > Azure AI Fundamentals (AI-900) Cert Prep : 3 Computer Vision Workloads on Azure. > Azure AI Fundamentals (AI-900) Cert Prep : 4 Natural Language Processing (NLP) Workloads on Azure. > View Certificate. <div> Microsoft Azure Machine Learning Conversational AI Artificial Intelligence (AI) Computer Vision Natural Language Processing (NLP) Big Data </div>
April 2024	Prepare for the AWS Certified Machine Learning - Specialty (MLS-C01) Exam, LINKEDIN LEARNING <ul style="list-style-type: none"> > AWS Certified Machine Learning - Specialty (MLS-C01) Cert Prep : 1 Data Engineering. > AWS Certified Machine Learning - Specialty (MLS-C01) Cert Prep : 2 Exploratory Data Analysis. > AWS Certified Machine Learning - Specialty (MLS-C01) Cert Prep : 3 Modeling. > AWS Certified Machine Learning - Specialty (MLS-C01) Cert Prep : 4 Machine Learning Implementation and Operations. > View Certificate. <div> Machine Learning Artificial Intelligence (AI) Applied Machine Learning Data Engineering Exploratory Data Analysis Data Modeling Amazon Web Services (AWS) MLOps Machine Learning </div>
April 2024	Career Essentials in GitHub Professional Certificate, GITHUB <ul style="list-style-type: none"> > Practical GitHub Actions. > Practical GitHub Project Management and Collaboration. > Practical GitHub Copilot. > Practical GitHub Code Search. > View Certificate. <div> GitHub GitHub Copilot Natural Language Processing (NLP) Project Management </div>

HONORS AND AWARDS

March 2022	Honorable Mention for thesis : "Spatial Super-Resolution of Light Fields using Neural Networks Trained with High Spatial Resolution Light Fields Captured with a Plenoptic Camera." Digital badge : Certificate , Faculty of Engineering, Pontificia Universidad Javeriana, Bogotá, Colombia.
November 2019	2nd place, Javeriana Electronics Expo : "PVLPower : Power Loss Quantifier in Photovoltaic Panels," Faculty of Engineering, Pontificia Universidad Javeriana, Bogotá, Colombia.
August 2016	Academic Excellence Award, Faculty of Engineering, Pontificia Universidad Javeriana, Bogotá, Colombia.

REFERENCES

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