Paula Arguello

As a problem-solving junior researcher, I am passionate about exploring the intersections of image processing, optics, and deep learning. I have experience in applying deep learning techniques and optical systems to address complex image processing challenges. I excel at collaborating with multidisciplinary teams and am dedicated to driving innovation in the field of image analysis. My research interests encompass image processing, optical and computational imaging, medical imaging, and visual privacy. I thrive on solving technical problems and am committed to advancing technology through impactful research.

CONTACT

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EDUCATION

Bachelor of Science in Systems Engineering *Expected Graduate September 2024*
Final-year Student.
Universidad Industrial de Santander (UIS), Colombia.

PRIZES AND AWARDS

Distinguished Student *2023*
Universidad Industrial de Santander (UIS), Colombia.

Best Paper Award: IEEE International Conference on Image Processing *2022*
ICIP 2022, Institute of Electrical and Electronics Engineers.

JOURNAL PAPERS

1. **Paula Arguello**, Jhon Lopez, Karen Sanchez, Carlos Hinojosa, Fernando Rojas-Morales, Henry Arguello. “Learning to Describe Scenes via Privacy-aware Designed Optical Lens". IEEE Transactions on Computational Imaging. (2024).

2. Brayan Monroy, Karen Sanchez, **Paula Arguello**, Juan Estupiñán, Jorge Bacca, Claudia V Correa, Laura Valencia, Juan C Castillo, Olinto Mieles, Henry Arguello, Sergio Castillo, Fernando Rojas-Morales. “Automated chronic wounds medical assessment and tracking framework based on deep learning." Computers in Biology and Medicine. (2023).

CONFERENCE PAPERS

1. **Paula Arguello**, Jhon Lopez, Carlos Hinojosa, Henry Arguello. “Optics lens design for privacy-preserving scene captioning." 2022 IEEE International Conference on Image Processing (ICIP). (2022).

2. David Morales, **Paula Arguello**, Miguel Márquez, Henry Arguello. “Snapshot compressive spectral video via a monocular optical system." 2020 IEEE Colombian Conference on Applications of Computational Intelligence (IEEE ColCACI 2020)

3. **Paula Arguello**, David Morales, Yesid Fonseca, Henry Arguello “Video-Tensor Completion using a Deep Learning approach" 2020 IEEE Colombian Conference on Applications of Computational Intelligence (IEEE ColCACI 2020)

RESEARCH PROJECTS

1. **Bachelor Thesis:** "LENS DESIGN FOR ENHANCING PRIVACY IN IMAGE CAPTIONING" Role: Main Researcher.
2. **SIMATEC:** "Image processing and deep learning as tools for universal health coverage. Case study: local and remote monitoring of ulcer treatment in lower extremities in patients from rural communities and municipalities of Santander." Role: Research Collaboration.
3. **Colibrí:** "Colibri is a PyTorch library in development for solving computational imaging tasks where optical systems and state-of-the-art deep neural networks are implemented to be easily used or modified for new research ideas." Role: Founder. Github.

SKILLS </>

Advanced	**Intermediate**	**Basic**
Python, Matlab	Java, C++, R	HTML, CSS, JS

LANGUAGES

Spanish *Foreign Language*

English *Advanced*

C1 TOEFL score: 100/120