

Gustavo PÉREZ

Ph.D. Student -Computer Science

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🏠 gperezs.com 🌐 github.com/gperezs 📄 google-scholar 🌐 linkedin.com/in/gperezs

🎓 EDUCATIONAL EXPERIENCE

- | | |
|--------------------------------|--|
| Present
September 2018 | University of Massachusetts Amherst M.Sc./PH.D. IN COMPUTER SCIENCE
Amherst, Massachusetts GPA : 3.9/4.0 |
| June 2018
January 2016 | Universidad de los Andes M.Sc. IN BIOMEDICAL ENGINEERING
Bogotá, Colombia
Thesis : <i>Automated Diagnosis of Lung Cancer with 3D Convolutional Neural Networks</i> |
| September 2008
January 2004 | Universidad del Norte Bs. IN ELETRONIC ENGINEERING
Barranquilla, Colombia
Thesis : <i>Medulogram Analysis Using Artificial Intelligence</i> |

📖 RESEARCH EXPERIENCE

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| Present
January 2019 | University of Massachusetts Amherst GRADUATE RESEARCH ASSISTANT
Amherst, Massachusetts
· Main Research Topic : Deep learning applied to computer vision.
> Star cluster Classification from LEGUS catalog using Deep Learning.
Python pyTorch Javascript HTML |
| January 2018
January 2016 | Universidad de los Andes GRADUATE RESEARCH ASSISTANT
Bogotá, Colombia
· Main Research Topic : Deep learning applied to natural and medical images.
> Automated Diagnosis of Lung Cancer with 3D Convolutional Neural Networks.
> Finding Four-Leaf Clovers : A Benchmark for Fine-Grained Object Localization.
> Automated Detection of Lung Nodules with Three-dimensional Convolutional Neural Networks.
· Implementation of the new website of the BCV Group : biomedicalcomputervision.uniandes.edu.co .
Matlab Python MatConvNet Caffe pyTorch Tensorflow |

🏛️ TEACHING EXPERIENCE

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|--------------------------------|---|
| January 2019
September 2018 | University of Massachusetts Amherst GRADUATE TEACHING ASSISTANT
Amherst, Massachusetts
· Course name : Computer Systems Principles (COMPSCI 230).
· 50 students (2 discussion sections).
C Java |
| December 2016
August 2016 | Universidad de los Andes GRADUATE TEACHING ASSISTANT
Bogotá, Colombia
· Course name : Analysis and Processing of Biomedical Images (IBIO 3470).
· 78 students (3 discussion sections).
Matlab Python |
| December 2005
October 2004 | KUMON Institute of Education of Colombia AUXILIARY TEACHER
Barranquilla, Colombia
· Grading of working material of students.
· Assistance in the academic formation of the students. |

August 2004 | KUMON Institute of Education of Colombia | AUXILIARY TEACHER
February 2004 | Barranquilla, Colombia
· Grading of working material of students.
· Assistance in the academic formation of the students.

PROFESSIONAL EXPERIENCE

January 2016 | **HORMESA America Ltd. | PROJECT MANAGER**
March 2010 | Bogotá, Colombia
· Responsible for the supervision, maintenance, technical service, assembly and commissioning of the equipment manufactured and/or commercialized by the company to America.
 > Managing, supervision of installation and commissioning of several projects for foundries in different countries; Portugal, Russia, Spain, Mexico, Colombia, Ecuador, USA, Cuba, Peru, Chile, and Argentina. (Further information available under request).
· Trade manager in South America; Conducting business documents, completion and submission of bids, trade missions, attendance at fairs, exhibitions and events related to the foundry industry.
 > Attendances and expositions in exhibitions and trade fairs; Germany, Colombia, Turkey, Chile, Peru, USA, Poland and Spain. (Further information available under request).
 > Trade missions; Greece, Peru, Spain, Egypt, Mexico, Ecuador, China, Brazil. (Further information available under request).
 > Implementation of the new website of the Company Group. www.hormesa-group.com

Autodesk AutoCAD

February 2010 | **HORMESA America Ltd. | JUNIOR ENGINEER**
March 2009 | Bogotá, Colombia
· Responsible for the supervision, maintenance, technical service, assembly and commissioning of the equipment manufactured and/or commercialized by the company to America.
 > Supervision of installation and commissioning of projects for foundries in Colombia and Ecuador. (Further information available under request).
 > Technical assistance, advisement, and technical studies for foundries.
· Marketing in South America; Conducting business documents, completion and submission of bids, trade missions.
 > Trade missions in Argentina and Brazil. (Further information available under request).

Autodesk AutoCAD

Schneider ZelioSoft2

Siemens LOGOSoft Confort

PUBLICATIONS & PROCEEDINGS

June 2019 | **Finding Four-Leaf Clovers : A Benchmark for Fine-Grained Object Localization.** The Sixth Workshop on Fine-Grained Visual Categorization, CVPR 2019. Long Beach, CA. USA.

 Paper  Project page

Python pyTorch Tensorflow

November 2017 | **Automated Detection of Lung Nodules with Three-dimensional Convolutional Neural Networks.** Proc. SPIE 10572, 13th International Conference on Medical Information Processing and Analysis, 1057218 (17 November 2017); doi : 10.1117/12.2285954; <http://dx.doi.org/10.1117/12.2285954>.

 Paper  Project page

Python Matlab pyTorch MatConvNet

April 2016 | **Lung Nodules Detection in CT images using Computer Vision.** Selected article for its oral presentation at the VIII International Seminar in Biomedical Engineering. Universidad de los Andes. Colombia, April 2016 | Conference Proceeding | ISSN 2322-7702.

Matlab

August 2009 | **Classification of white blood cells using artificial intelligence.** Selected article for its oral presentation. In Proceedings of Latin-American Conference on Networked and Electronic Media (pp. 1-4). LACNEM 2009. Colombia, August 2009 | Conference Proceeding.

Matlab NI LabView

INVITED TALKS

- November 2019 **Finding Four-Leaf Clovers : A Benchmark for Fine-Grained Object Localization.** Camera Trap Tech Symposium. Nov 2019 | Google Headquarters. Mountain View, CA, USA.
- April 2018 **Automated detection of lung cancer using 3D ConvNets.** IEEE International Symposium on Biomedical Imaging - ISBI 2018 Challenge - Lung Nodule Malignancy Prediction, Based on Sequential CT Scans. Apr 2018 | Washington DC, USA.

SERVICES

Journal reviews

- Reviewer of Medical Biological Engineering Computing (2019).
- Reviewer of IEEE Transactions on Cybernetics (2018).

Conference reviews

- Reviewer of STSIVA (2019). Signal Image Processing.
- Reviewer of EUSIPCO (2019). Signal Image Processing.
- Reviewer of IVPAl (2018). Image, Video Processing and Artificial Intelligence.

RELEVANT COURSEWORK

Graduate

- Advanced Algorithms -COMPSCI 611
- Computer Vision -COMPSCI 670
- Intelligent Visual Computing -COMPSCI 674
- Neural Networks : A Modern Introduction -COMPSCI 682
- Artificial Intelligence -COMPSCI 683

ADDITIONAL COURSEWORK

- August 2018 **CITI Program -Collaborative Institutional Training Initiative** (Online). Responsible Conduct of Research for Engineers. [[Certificate link](#)].
- Jan-Mar 2017 **MITx -Online learning initiative of the Massachusetts Institute of Technology** (Online). Introduction to Computer Science and Programming Using Python. (135 hours) [[Certificate link](#)].
- September 2015 **Universidad Antonio Nariño** (Bogotá, Colombia). International Course in Biomedical Data Analysis for Rehabilitation Engineering and Neuroengineering - CIADBIRN 2015. (24 hours).

SCHOLARSHIPS & AWARDS

- April 2018 **1st place at the ISBI 2018 Lung Challenge** (Washington DC, USA). Ranked 1st place at the ISBI 2018 - Lung Nodule Malignancy Prediction, Based on Sequential CT Scans Challenge.
- September 2017 **Fulbright scholarship** (Bogota, Colombia). Colciencias-Fulbright Cohort 2018 scholarship to undertake postgraduate studies in the United States.
- September 2008 **Distinguished student** (Barranquilla, Colombia). Distinguished student, Universidad del Norte.

SKILLS¹

Programming	Matlab ² , Python ² , Javascript
Deep Learning	Tensorflow, pyTorch ² , Caffe, MatConvNet
Electronics	NI LabView, Schneider ZelioSoft2, Siemens LOGOSoft
Other	Autodesk AutoCAD, Autodesk 3ds max, HTML, \LaTeX

LANGUAGES

Spanish	● ● ● ● ● ●
English	● ● ● ● ● ○
Japanese	● ● ○ ○ ○ ○

¹ Project experience, ² Proficient.