Manuel Ignacio Pérez Carrasco

Curriculum Vitae
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https://github.com/mperezcarrasco

EDUCATION

Master in Computer Science `2017 - 2019`

University of Concepción

Recipient of fully funded "Articulation Scholarship" (2017 - 2018). Author of thesis called "*Semi-supervised adversarial variational domain adaptation for image classification*". Best student paper award in the Astroinformatics 2019 conference.

Industrial Engineer `2013 - 2018`

University of Concepción

Graduated with maximum distinction. Teaching assistant for *System modeling* and *Machine Learning for Bussines Intelligence* courses. Author of undergraduate thesis "*Attributes transfer in deep neural networks and their application to astronomical images*". Article published in Publications of the Astronomical Society of the Pacific.

BSc. in Engineering Sciences `2013 - 2016`

University of Concepcion

EXPERIENCE

Research Assistant `2020 - present`

Biomedical Laboratory, University of Concepción

Design and implementation of a real-time algorithm for drowsiness detection using EEG signals.

Machine Learning Engineer `2020 - present`

Automatic Learning for the Rapid Classification of Events (ALeRCE)

Encharged of design and implementation of a novelty detection algorithm for astronomical light curves processed from the alert stream Zwicky Transient Facility (ZTF) telescope.

Lecturer `2019 - present`

Department of Industrial Engineering, University of Concepción

Co-teacher of: "Introduction to Machine Learning (2019-2)" and "Topics in Machine Learning (2020-1)", elective courses for graduate and undergraduate students of engineering.

Machine Learning Engineer `2019-2`

Unidad de Data Science, University of Concepción

Design and implementation of labeling, training and prediction software to count, detect and segmentate trees using georeferenced images.

Research Scholar `2019-1`

Institute for Applied Computational Science (IACS), Harvard University

Research focused on semi-supervised domain adaptation algorithms for image classification. Project supervised by Pavlos Protopapas, IACS scientific director.

Teaching Fellow 2019-1
Institute for Applied Computational Science (IACS), Harvard University
> Encharged of grading and office hours for CS109b: "Data Science 2: Advanced topics in data science", mandatory course of the Master of Science in Data Science at Harvard University.

Freelance consultant 2018-2
ARAUCO Company
> Design and implementation of deep learning algorithms for counting objects in hyperspectral images. Project winner of the ARAUCO innovation challenge.

Internship 2018-1
Coca-cola Embonor S.A
> Design and implementation of forecasting algorithms for sales and demand estimation.

PUBLICATIONS

M. Pérez-Carrasco, G. Cabrera-Vives, P. Protopapas, N. Astorga, and M. Belhaj. "*Matching embeddings for Semi-supervised Domain Adaptation*". In preparation.

B. Karelovic, R. Molina, **M. Pérez-Carrasco**, G. Cabrera-Vives, R. Saavedra-Passache, P. Cerulo. "*Detection and Segmentation of Tree Plantations in High Spatial Resolution RGB Imagery Obtained from Unmanned Aerial Vehicle*". In preparation.

F. Förster, G. Cabrera-Vives, E. Castillo-Navarrete, P. A. Estevéz, P. Sánchez-Sáez, et al. "*The Automatic Learning for the Rapid Classification of Events (ALeRCE) Alert Broker*". Manuscript submitted to American Astronomical Society Journals, 2020.

M. Pérez-Carrasco, G. Cabrera-Vives, M. Martinez-Marín , P. Cerulo, R. Demarco, P. Protopapas, J. Godoy, and M. Huertas-Company. "*Multiband galaxy morphologies for CLASH: a convolutional neural network transferred from CANDELS*", Manuscript published in Publications of the Astronomical Society of the Pacific, 2019.

CONFERENCES AND WORKSHOPS

Jornadas Chilenas de la Computación 2019. University of Concepción, Concepción, Chile.

Astroinformatics 2019. **Expositor. Best student paper award**. Caltech, Pasadena, CA, USA.

6th CMM Pucón Symposium 2019. Data Science for Frontier Astronomy, Biology, Medicine and Climate. Puerto Varas, Chile.

ComputeFest 2019. **Trainer**. Harvard University, Boston, MA, USA.

5th CMM Pucón Symposium 2017. Data Science for Frontier Astronomy, Biology and Medicine. Puerto Varas, Chile.

Big Data Astronomy Workshop 2018. **Expositor**. University of Concepción, Concepción, Chile.

SKILLS

Languages	Spanish
	English
Tools	SCIKIT-LEARN, KERAS, PYTORCH, TENSORFLOW, GIT.
O.S.	GNU/LINUX, MAC OS.
Cloud	GOOGLE CLOUD, AMAZON WEB SERVICES.