

Ricardo Pereira de Magalhães Cruz

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My PhD topic is on using deep learning for computer vision. I use TensorFlow and PyTorch, and I have several fundamental publications on the area. I have been teacher assistant at FEUP, teaching Python, C and C++. I have participated in several projects working on web development (flask), databases (mongo, postgres), multimedia (sdl, gtk, qt) and others.

- Education				
 - 	(2021)	PhD in Computer Science (currently waiting for defense!) co-joint University of Porto, Minho and Aveiro		
 - 	2015	MSc in Applied Mathematics (Grade=18/20) Faculty of Sciences, University of Porto		
	2012	BSc in Computer Science (Grade=16/20)		
		Faculty of Sciences, University of Porto		
Career				
 - 	2018-2021	Teacher Assistant (Python and C/C++) Faculty of Engineering, University of Porto		
 - 	2016-2020	PhD Grant (deep learning and computer vision) INESC TEC		

INESC TEC

- **2014** Research Grant (epidemiology modelling)

Mathematics Center of the University of Porto

2007 Google Grant: Summer of Code (dynamic layouts)

Research Grant (machine learning)

OpenOffice.org

2006 Google Grant: Summer of Code (YaST GTK port)

Novell / openSUSE

_ Other related work

2015

2018-2020 Consulting for a geography team at FLUP

In total, I have done seven scraping and automation jobs.

- **2018-2019** Mentor at Coursera

Andrew Ng's course on Improving Deep Neural Networks: Hyperparameter

tuning, Regularization and Optimization

2014 Consulting at Flykt

Search algorithms for travel destinations.

Awards

2020 Best Oral Presentation: Training Convolutional Neural Networks to be

Background Invariant

RECPAD 2020 conference

2021 Pedagogical Recognition Award

Faculty of Engineering, University of Porto

-- **2021** Sustainable Ideas

Faculty of Engineering, University of Porto

Ordinal Losses for Classification of Cervical Cancer Risk [accepted] T. Albuquerque, R. Cruz, J. Cardoso PeerJ Computer Science Background Invariance by Adversarial Learning [accepted] R. Cruz, R. Prates, E. Filho, J. Costa, J. Cardoso 25th International Conference on Pattern Recognition (ICPR), IEEE Automatic Augmentation by Hill Climbing R. Cruz, J. Costa, J. Cardoso 28th International Conference on Artificial Neural Networks (ICANN), Springer Averse Deep Semantic Segmentation R. Cruz, J. Costa, J. Cardoso 41st Engineering in Medicine and Biology Conference (EMBC), IEEE Insulator visual non-conformity detection in overhead power distribution lines using deep learning R. Prates, R. Cruz, A. Marotta, R. Ramos, E. Filho, J. Cardoso Journal Computers & Electrical Engineering, Springer A Class Imbalance Ordinal Method for Alzheimer's Disease Classification R. Cruz, M. Silveira, J. Cardoso 2018 International Workshop on Pattern Recognition in Neuroimaging (PRNI), IEEE Binary ranking for ordinal class imbalance R. Cruz, K. Fernandes, J. Costa, M. Pérez Ortiz, J. Cardoso Journal Pattern Analysis and Applications, Springer Deep image segmentation by quality inference K. Fernandes, R. Cruz, J. Cardoso International Joint Conference on Neural Networks (IJCNN), IEEE Constraining type II error: building intentionally biased classifiers R. Cruz, K. Fernandes, J. Costa, J. Cardoso International Work-conference on Artificial Neural Networks (IWANN), Springer Pine-to-coarse ranking in ordinal and imbalanced domains: an application to liver transplantation M. Pérez-Ortiz, K. Fernandes, R. Cruz, J. Cardoso International Work-conference on Artificial Neural Networks (IWANN), Springer Combining ranking with traditional methods for ordinal class imbalance R. Cruz, K. Fernandes, J. Costa, M. Pérez-Ortiz, J. Cardoso International Work-conference on Artificial Neural Networks (IWANN), Springer Combining canking with traditional methods for ordinal class imbalance R. Cruz, K. Fernandes, J. Costa, M. Pérez-Ortiz, J. Cardoso Internation	口	Publicat	cions
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Recommendation contacts will be provided upon request.

Consult my github for more projects: https://github.com/rpmcruz.