

Ricardo Pereira de Magalhães Cruz

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For the last five years, I have been working as a machine learning researcher at INESC TEC. I have just finished my Ph.D. thesis which I will defend very soon. Meanwhile, I have also been working at FEUP as a teacher assistant (TA): teaching Python and C++. As a machine learning researcher, I have worked mostly on deep learning applied to computer vision, using both TensorFlow and PyTorch. In the past, I have participated in many open-source projects and also did much consulting work: on web development (flask), databases (mongo, postgres), multimedia (sdl, gtk, qt), server administration (hpc) and others. In terms of education, I am about to finish my Ph.D. in computer science. I have a masters in applied mathematics and a bachelors in computer science.

<pre>Education</pre>	
- (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	
- 2015	Research Grant (machine learning) INESC TEC	
- 2014	Research Grant (epidemiology modelling) Mathematics Center of the University of Porto	
- 2007	Google Grant: Summer of Code (dynamic layouts) OpenOffice.org	
- 2006	Google Grant: Summer of Code (YaST GTK port)	

Novell / openSUSE

Other related	d work
- 2018-2020	Consulting for a geography team at FLUP
1	In total, I have done seven scraping and automation jobs.
- 2018 - 2019	Mentor at Coursera
I I	Andrew Ng's course on Improving Deep Neural Networks: Hyperparameter
	tuning, Regularization and Optimization
2014	Consulting at Flykt
	Search algorithms for travel destinations

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.