

rafael.felix

computer vision researcher

about

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Australia

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languages

native portuguese
english & spanish
fluent
mandarin – *learning*

programming

Python, C/C++
pytorch
tensorflow
Matlab, Java
numpy, sklearn,
GitHub
OpenCV

data mining

Computer Vision,
Machine Learning,
Deep Learning,
Neural Nets, SVMs,
Gaussian Processes

technology

hadoop (basic),
netbeans, pycharm
sublime, BigQuery

interests

My research interests include deep learning combining vision and language for explainable artificial intelligence.

keywords: *computer vision, deep learning, open-set recognition, {generalized,zero,few,one}-shot learning, transfer learning, domain adaptation, adversarial learning*

publications

- 2019 **Generic Multi-modal Ensemble Classification for GZSL** manuscript
Felix, Rafael and Harwood B. and Sasdelli, M. and Reid, I. and Carneiro, G.
- 2019 **GZSL with a Classifier Ensemble over Multi-Modal Embedding Spaces**
In submission
Felix, Rafael and Harwood B. and Sasdelli, M. and Reid, I. and Carneiro, G.
- 2019 **GZSL with Domain Classification in a Joint Semantic and Visual Space**
DICTA 2019
Felix, Rafael and Harwood B. and Sasdelli, M. and Reid, I. and Carneiro, G.
- 2019 **Multi-modal Ensemble Classification for GZSL** In submission
Felix, Rafael and Sasdelli, M. and Reid, I. and Carneiro, G.
- 2018 **Multi-modal Cycle-Consistent Generalized Zero-Shot Learning.** ECCV
github/rfelixmg/frwgan-eccv18
Felix, Rafael and Kumar, BG Vijay and Reid, Ian and Carneiro, Gustavo
- 2015 **Thresholding the Courtesy Amount of Brazilian Bank Checks Using a Local Methodology.** PAAMS
Felix, Rafael, Leandro Augusto da Silva, and Leandro Nunes de Castro

experience

- since 2016 **Australian Centre for Robotic Vision** PhD Researcher.
Visual Learning.
- since 2018 **The University of Adelaide** Casual Lecturer.
P/T Lecturer on Foundations of Computer Science.
- 01–06, 2016 **Instituto Eldorado, Brazil** ML-Analyst
Outsourced for Motorola BR.
Machine Learning for Mobile Applications.
- 04–12, 2015 **upLexis** ML-Developer.
Machine Learning for WebCrawling.
- 2013–2015 **Sincronica** M.Sc. Researcher.
Image Processing & Machine Learning for Document Analysis.

education

2016-Dec/2019	Ph.D. in Computer Science <i>Deep Learning for Zero-shot Learning.</i>	The University of Adelaide
2013–2015	M.Sc. in Electrical and Computer Engineering Majoring in Computer Engineering Specialization in Image Processing & Machine Learning	Uni. Presbiteriana Mackenzie
2008-2011	B.Sc. in Information Systems Majoring in Information Systems/Computer Science	Unimontes

awards and scholarships

2016-2020	Australian Research Council PhD Scholarship	
2018	Robotic Vision Symposium 2018 Best poster award for Multi-modal Cycle-consistent Generalized Zero-Shot Learning	
2017	Ingenuity 2017 - Faculty of ECMS, The University of Adelaide Prize for The chessboard project as supervisor	3rd position
2017	Thee Minutes Thesis - Faculty of ECMS, The University of Adelaide People's choice award	
2013-2015	Brazilian Federal Agency for Coordination of Improvement of Higher Education Personnel M.Sc. Scholarship	

projects

since 2016	Visual Learning This project addresses important challenges in deep learning, such as: effective transfer learning, role of probabilistic graphical models in deep learning, efficient training and inference algorithms, etc	ACRV
2017	The Automatic Chess Board This project addresses the creation of a low-cost (under USD \$600), yet responsive automatic chess board. In this project the system detects and respond to the movement of the user, by using computer vision techniques rather than a computer interface.	ACRV
04–12, 2015	Chamaleon - Web-Crawler automation The project addressed the automation of web-crawlers for acquiring data from online sources at the company upLexis.	upLexis
2014-2015	Automated processing of bank check images for OCR The project has two main contributions: the creation of a novel dataset of bank check images; and a novel method for processing bank check images.	Sincronica
2013-2015	Document Classification and Quality Assessment The project aimed at developing a classification pipeline for scanned images of documents, that included novel class detection.	Sincronica

biography

I am currently pursuing my Ph.D. at The University of Adelaide (UoA), Australia, under the supervision of Prof. Gustavo Carneiro, Dr. Michele Sasdelli, and Prof. Ian Reid, with a prestigious scholarship from Australian Research Council, which I will complete in December 2019.

Previously, I have industry experience. In my first position, I developed machine learning applications for acquiring data from online sources. Secondly, I was a data scientist at a Motorola outsource company working on machine learning for mobile platforms.

I received my M.Sc. from Universidade Mackenzie, where I worked with Prof. L. de Castro, with a prestigious scholarship from the federal agency *CAPES*. In my master degree, I focused on Neural Networks and their use for image processing on scanned documents, and their intersection with natural language processing. Over the course of my M.Sc., I worked on parallel projects using machine learning to develop applications for scanned documents.

On my free time, I enjoy tackling quick projects like programming affordable drones, and small robots.