rafael.**felix**

computer vision researcher

about

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Australia

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in:rfelixmg
github: rfelixmg

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*

education

since 2016 **Ph.D. candidate** in Computer Science — The University of Adelaide
Optimization/Regularization for Generalized Zero-shot learning.

2013–2015 **M.Sc. in Electrical and Computer Engineering** — Uni. Presbiteriana Mackenzie
Majoring in Computer Engineering
Specialization in Image Processing & Machine Learning

2008-2011 **B.Sc. in Information Systems** — Unimontes
Majoring in Information Systems/Computer Science

experience

since 2016 **Australian Centre for Robotic Vision** — PhD Researcher.
Visual Learning.

since 2018 **The University of Adelaide** — 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.

publications

2018 **Multi-modal Cycle-Consistent Generalized Zero-Shot Learning.** — ECCV
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

applications

2018 **cycle-WGAN** rfelixmg/frwgan-eccv18
Generalized Zero-Shot Learning model for classification of novel classes

projects

since 2016 **Visual Learning** ACRV
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

04–12, 2015 **Chamaleon - Web-Crawler automation** upLexis
The project addressed the automation of web-crawlers for acquiring data from online sources at the company upLexis.

2014-2015 **Automated processing of bank check images for OCR** Sincronica
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.

2013-2015 **Document Classification and Quality Assessment** Sincronica
The project aimed at developing a classification pipeline for scanned images of documents, that included novel class detection.

biography

I am currently pursuing my Ph.D. at The University of Adelaide (UoA), Australia, under the supervision of Prof. Gustavo Carneiro and Prof. Ian Reid. Recently at UoA, I helped to design and teach a course on Foundations of Computer Science, which has an average enrollment of 60 students per semester. Previously, I had a working 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. Leandro de Castro 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.