

# Miguel Monteiro

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📄 [Google Scholar](#) 📄 [LinkedIn](#) 📄 [Github](#)

## Professional

- 2023-Present **Machine Learning Engineer/Scientist**, *Qureight*, UK.  
Developing computer vision algorithms for segmentation, classification, object detection in medical images.
- 2018-2023 **Research Assistant**, *Imperial College London*, UK.  
Project lead for the CT lesion analysis pipeline for the EU FP7 project CENTER-TBI
- 2020-2021 **Machine Learning Engineer/Consultant**, *Triradiate Industries*, USA (remote).  
Developed a deep learning image segmentation pipeline used in production.
- 2020 **ML Research Intern**, *Microsoft Research Cambridge*, Cambridge, UK.  
Internship working on outlier detection and label noise in image classification.
- 2017-2018 **Research Scientist**, *INESC-ID*, Lisboa, Portugal.  
Using machine learning to predict stroke patients' functional outcome. Using deep learning for medical image segmentation in stroke patients.
- 2016 **R&D Engineer**, *Celfinet*, Algés, Portugal.  
Using time series analysis to forecast network traffic. Developing a load balancing algorithm for a Self Organising Network (SON).

## Academic

- 2018-2022 **PhD in Machine Learning**, *Imperial College London*, UK.  
Topics: machine learning, computer vision, medical imaging, generative models (VAEs, GANs, Normalising flows), Bayesian statistics, probabilistic modelling, causal inference.
- 2014-2016 **Dual MSc Degree**, *Instituto Superior Técnico (IST) & Royal Institute of Technology (KTH)*, Lisbon, Portugal & Stockholm, Sweden.  
MSc in Electrical Engineering and Computer Science *Grade - 18/20 (top 1%)*
- 2011-2014 **BSc degree**, *Instituto Superior Técnico (IST)*, Lisbon, Portugal.  
BSc in Electrical Engineering and Computer Science *Grade: 16/20 (top 4%)*

## Selected Publications [click for full list](#)

**Miguel Monteiro**, Fabio De Sousa Ribeiro, Nick Pawlowski, Daniel Coelho de Castro, Ben Glocker. *Measuring axiomatic soundness of counterfactual image models* in **ICLR**, 2023.

**Miguel Monteiro**, Loïc Le Folgoc, Daniel Coelho de Castro, Nick Pawlowski, Bernardo Marques, Konstantinos Kamnitsas, Mark van der Wilk, Ben Glocker. *Stochastic segmentation networks: Modelling spatially correlated aleatoric uncertainty* in **NeurIPS** 2020.

**Miguel Monteiro**, Virginia FJ Newcombe, Francois Mathieu, Krishma Adatia, Konstantinos Kamnitsas, Enzo Ferrante, Tilak Das, Daniel Whitehouse, Daniel Rueckert, David K Menon, Ben Glocker. *Multiclass semantic segmentation and quantification of traumatic brain injury lesions on head CT using deep learning: an algorithm development and multicentre validation study* in **The Lancet Digital Health**, 2020.

## Programming

C, C#, C++, CUDA, PYTHON, JAX, PYTORCH, TENSORFLOW, WEIGHTS AND BIASES, R, MATLAB, DOCKER, UNIX, BASH, GIT, AWS, KUBERNETES

## Awards

- 2017 First place in the Ischemic Stroke Lesion Segmentation challenge - ISLES 2017
- 2016 Best Student Paper Award - URSI 2016
- 2012-2016 Diploma Of Academic Excellence - IST (one for each of the five years)

## Invited Talks

- 2023 Causality Discussion Group, 20th October, 2023 - Online
- 2023 Causality in Practice, June 12th, 2023 - Institute Pascal, Orsay, France
- 2023 Microsoft Research Cambridge, January 27th, 2023 - Online
- 2021 BMIC Student Conference, May 27th, 2021 - Online
- 2020 Heartflow, June 30th, 2020 - Online
- 2018 Prognostic Studies Advanced Course for medical PhD students April 13-14, 2018 - Faculdade de Medicina Lisboa, Portugal
- 2018 Priberam Machine Learning Lunch Seminars March 20, 2018 - IST, Lisbon, Portugal
- 2018 ISMRM Workshop on Machine Learning March 14-17, 2018 - Asilomar Conference Grounds, Pacific Grove, CA, USA
- 2018 DELix Lisbon Winter School on Data Science and Engineering February 15-17, 2018 - IST, Lisbon, Portugal

## Reviewing

The Journal of Machine Learning for Biomedical Imaging (MELBA); International Conference on Machine Learning 2022 (ICLR2022); IEEE Transactions on Medical Imaging (TMI); Medical Image Analysis (MEDIA).