Pedro Neto

https://scholar.google.com/citations?user=xR33Ko0AAAAJ   pedroneto_09@hotmail.com
https://www.linkedin.com/in/pedro-neto-a94862106/   https://netopedro.github.io

EDUCATION

FEUP - Faculty of Engineering, Porto, Portugal
PhD - Doctor of Philosophy, Eletrical Engineering , Present   Average: 17 out of 20
Aalto University, Espoo, Finland
MSc - Master of Science, Computer Science, April 2020   Average: 4.24 out of 5
ISEP - Porto School of Engineering, Porto, Portugal
BSc - Bachelor of Science, Informatics Engineering , July 2018   Average: 17 out of 20

EXPERIENCE

Machine Learning Research Assistant   INESC TEC
Porto, Portugal   10/2020-Present
- **Biometrics**: Improving state-of-the-art methods in face recognition, face presentation attack detection and variations (e.g. masked face recognition).
- **Explanability** and **Interpretability**: Applying current methods of explainable artificial intelligence to biometric problems, as well as, developing novel methods for these applications.
- CADPath project: Developing deep learning solutions to diagnose colorectal and cervical cancers from whole slide images. Exploration of weakly supervised approaches.

Research Intern   Feedzai
Porto, Portugal   07/2020-09/2020
- Integrated the TRAFFIC (TRAnsformers For Fraud IdentifiCation) project.
- **TensorFlow** and **Keras** implementation of **transformers** on financial fraud use cases.
- Goals ranging from good **metric performance, fast computations** and **autoregressive training**.

Machine Learning Research Assistant   Aalto University
Espoo, Finland   09/2019-04/2020
- Implemented a **convolutional neural network** to classify prostate cancer clinical significant lesions with **0.87 AUC**.
- Implemented a **3D UNet** model to segment the prostate from **3D mpMRI** using **T2W** and **ADC** sequences, with **0.915 overlapping area**.
- Used a **3D ResNet-18** model to segment prostate cancer lesions.

Summer Machine Learning Intern   INESC TEC
Porto, Portugal   07/2019-08/2019
- Implemented a **real-time face recognition system** using **Pytorch**, **Opencv** and a **customized dataset** to authorize staff into the lab building.

Summer Intern   Armis Group
Porto, Portugal   06/2017-09/2017
- Developed the backend in **C#** and the **Swift** frontend of an **iOS** application to track in real-time Handball games results and scorers.

SCIENTIFIC PUBLICATIONS

Metrics:
Publications = 5 —— Citations = 28 —— H-index = 3 —— i10-index = 1

Myope Models - Are face presentation attack detection models short-sighted?
Workshops of the 2022 IEEE Winter Conference on Applications of Computer Vision (WACV)
Pedro C. Neto, Ana F. Sequeira and Jaime S. Cardoso

FocusFace: Multi-task Contrastive Learning for Masked Face Recognition

IEEE International Conference on Automatic Face and Gesture Recognition 2021
Pedro C. Neto, Fadi Boutros, Joao Ribeiro Pinto, Naser Damer, Ana F. Sequeira and
Jaime S. Cardoso

**My Eyes Are Up Here: Promoting Focus on Uncovered Regions in Masked
Face Recognition**
BIOSIG 2021
Pedro C. Neto, Fadi Boutros, Joao Ribeiro Pinto, Mohsen Saffari, Naser Damer, Ana
F. Sequeira and Jaime S. Cardoso

CAD Systems for Colorectal Cancer from WSI: we are not there yet.
Scientific Reports, 2021
Sara P. Oliveira*, Pedro C. Neto*, João Fraga*, Diana Montezuma, Ana Monteiro,
João Monteiro, Liliana Ribeiro, Sofia Gonçalves, Isabel M. Pinto and Jaime S. Cardoso

MFR 2021: Masked Face Recognition Competition
2021 International Joint Conference on Biometrics (IJCB 2021)
Fadi Boutros, Naser Damer, Jan Niklas Kolf, Kiran Raja,Florian Kirchbuchner, Raghaven-
dra Ramachandra, (...), Pedro C. Neto, Ana F. Sequeira, Joao Ribeiro Pinto, Mohsen
Saffari and Jaime S. Cardoso

INTERNSHIP SUPERVISION

Supervisor of Mariana Gandra - Bachelor's internship - 2022
- Injecting domain knowledge for interpretable face recognition.

Supervisor of Mafalda Oliveira - Bachelor's internship - 2022
- Injecting domain knowledge for interpretable face recognition.

Supervisor of Catarina Moreira - Bachelor's internship - 2022
- Explainable methods for face presentation attack detection.

Co-supervisor of Breno Pimentel - Summer internship - 2021
- XAI4Biometrics - Explainable Artificial Intelligence for Biometrics.

Co-supervisor of Marcelo Carvalho - Master's internship - 2021
- Methods for face presentation attack detection.

SCIENTIFIC CONFERENCES AND WORKSHOPS

ICCV 2021 CDPath Workshop Publicity Chair
- Workshop on computational challenges in digital pathology.

WACV 2022 xai4Biometrics Workshop Sponsorship Chair
- Workshop on explainability and interpretability methods for biometrics.

REVIEWER AT:

Journal
- EIT Biometrics

Conference/Workshop
- 2022 IEEE Winter Conference on Applications of Computer Vision (WACV)
- WACV 2022 - Workshop on Manipulation, Adversarial, and Presentation Attacks in
Biometrics