João Monteiro

INRS-EMT, 800 Rue de la Gauchetière Ouest
Montreal, Canada
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EDUCATION

Institut National de la Recherche Scientifique — January 2017 - Present
Ph.D. candidate
Montreal, Canada

University of Pernambuco — August 2015 - December 2016
Master of Science in Computer Engineering
Recife, Brazil

University of Pernambuco — August 2007 - June 2012
Bachelor in Mechanical Engineering
Recife, Brazil

RESEARCH INTERESTS

- Machine learning: Metric learning, Generative models, Domain generalization
- Speech processing: Speaker and spoken language modelling, Speech recognition

EXPERIENCE

Research

Google Research, — September 2020 - December 2020 (Expected)
Research intern - Cross-language OCR

Centre de Recherche Informatique de Montreal, — January 2018 - Present
Student researcher - Speaker and language recognition

Huawei Noah's Ark Lab - Montreal, — July 2019 - February 2020
Research intern - Cross-speaker speech recognition

University of Pernambuco, — June 2009 - June 2010
Undergraduate research assistant - Nonlinear optics

Industry

Fiat Chrysler Automobiles - Brazil, — March 2014 - November 2016
Manufacturing Analyst

Gerdau Group - Brazil, — November 2011 - March 2014
Process Engineer

Gerdau Group - Brazil, — March 2010 - November 2011
Engineering Intern

SELECTED PUBLICATIONS

- **J. Monteiro**, I. Albuquerque, J. Alam, R. D. Hjelm, T. Falk "An end-to-end approach for the verification problem: learning the right distance", 37th International Conference on Machine Learning (ICML), 2020. arXiv:2002.09469

- I. Albuquerque, **J. Monteiro**, M. Darvishi, T. Falk, I. Mitliagkas "Generalizing to unseen domains via distribution matching", Uncertainty and Robustness in Deep Learning Workshop at ICML, 2020. arXiv:1911.00804
- **J. Monteiro**, J. Alam, T. Falk, "An Ensemble Based Approach for Generalized Detection of Spoofing Attacks to Automatic Speaker Recognizers", 45th International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020.
- M. Ravanelli, J. Zhong, S. Pascual, P. Swietojanski, **J. Monteiro**, J. Trmal, Y. Bengio, "Multi-task self-supervised learning for Robust Speech Recognition", 45th International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020. arXiv:2001.09239
- **J. Monteiro***, I. Albuquerque*, T. Doang, B. Considine, T. Falk, I. Mitliagkas, "Multi-objective training of Generative Adversarial Networks with multiple discriminators", arxiv:1901.08680, 36th International Conference on Machine Learning (ICML), 2019. ****Equal contribution***
- T. Doan, **J. Monteiro**, I. Albuquerque, B. Mazoure, A. Durand, J. Pineau, R. D. Hjelm. "Online Adaptative Curriculum Learning for GANs", The 33rd AAAI Conference on Artificial Intelligence, 2019. arXiv:1808.00020
- **J. Monteiro**, J. Alam, T. H. Falk, "End-to-end Detection of Attacks to Automatic Speaker Recognizers with Time-attentive Light Convolutional Neural Networks", IEEE MLSP, 2019.
- **J. Monteiro**, J. Alam, "Development of Voice Spoofing Detection Systems for 2019 Edition of Automatic Speaker Verification and Countermeasures Challenge", IEEE ASRU, 2019.
- **J. Monteiro**, J. Alam, T. H. Falk, "Residual Convolutional Neural Network with Attentive Feature Pooling for End-To-End Language Identification from Short-Duration Speech", Computer Speech and Language.
- **J. Monteiro**, J. Alam, T. H. Falk, "Combining Speaker Recognition and Metric Learning for Speaker-Dependent Representation Learning", Interspeech, 2019.
- **J. Monteiro**, I. Albuquerque, Z. Akhtar and T. Falk. "Generalizable Adversarial Examples Detection Based on Bi-model Decision Mismatch", IEEE SMC, 2019.
- G. Bhattacharya, **J. Monteiro**, J. Alam, and P. Kenny. "SpeakerGAN: Recognizing Speakers in New Languages using Generative Adversarial Networks", Interpretability and Robustness for Audio, Speech and Language Workshop at the 32nd NeurIPS, 2018.
- G. Bhattacharya, **J. Monteiro**, J. Alam, and P. Kenny. "Generative Adversarial Speaker Embedding Networks for Domain-Robust End-to-End Speaker Verification", 44th International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2019.
- **J. Monteiro**, L. A. Goméz, "Resonant third order nonlinear optical susceptibility of gold nanoparticles". Journal of the Optical Society of America B, 2012.

RELEVANT COURSEWORK

Theoretical Principles for Deep Learning (IFT6085 - Université de Montréal, A+)
- Project repository: `https://github.com/joaomonteirof/hGAN`

Probabilistic Graphical Models (IFT6269 - Université de Montréal, A)
- Project and assignments repository: `https://github.com/joaomonteirof/ift6269`
- Project report: `http://bit.ly/pgm-final-report`

Multi-modal Signal Processing (Institut National de la Recherche Scientifique, A+)
- Project repository: `https://github.com/joaomonteirof/emotion_recognition`

Deep learning (IFT6266 - Université de Montréal, A)

- Project blog: https://ift6266h17jbmf.wordpress.com/

SCHOLARSHIPS

- Programme de Bourse du CRIM pour Études Supérieures, 2018/2019, 2019/2020
- CNPq (Brazil) undergraduate young researcher scholarship, 2009

OTHER

- Professional service: Reviewer for ICML'20, NeurIPS'20, and IEEE Signal Processing Letters.
- Invited talks: The verification problem and its applications to voice biometrics (Huawei Noah's Ark lab - November 2019)
- Language: Portuguese (native), English (fluent), Italian (advanced), French (beginner)

Github https://github.com/joaomonteirof

Google Scholar https://scholar.google.ca/citations?user=hkO47vsAAAAJ&hl=en