Gonçalo Mordido

goncalomordido@gmail.com goncalomordido https://goncalomordido.github.io

Work

2022 – Now | **Mila - Quebec AI Institute & Polytechnique Montreal** (Canada)
Postdoctoral Fellow
- Efficient processing of deep neural networks by leveraging algorithm-hardware co-design.

2020 | **NVIDIA** (Germany)
Research Intern (4 months)
- Compression of depth-wise separable convolutions in deep neural networks.

2018 – 2019 | **NVIDIA** (Germany)
Research Intern (6 months)
- Compression of deep neural networks using Monte Carlo methods.

2016 – 2017 | **NOVA University Lisbon** (Portugal)
Research Assistant (1 year)
- Automated discovery and quality assessment of user-generated content with machine learning.

Education

2017 – 2021 | **Hasso Plattner Institute** (Germany)
Ph.D. in Artificial Intelligence
- Grade: Magna cum laude
- Thesis: Diversification, compression, and evaluation methods for generative adversarial networks.

2015 – 2017 | **NOVA University Lisbon** (Portugal)
M.Sc. in Computer Science Engineering
- Grade: A
- Thesis: Automated organization and quality analysis of user-generated audio content.

2012 – 2015 | **NOVA University Lisbon** (Portugal)
B.Sc. in Computer Science Engineering
- Grade: A

Awards & Recognition

2021 | **Honors Ph.D. graduation**. Hasso Plattner Institute

2020 | **Recognition award** for "exceptional and outstanding contributions". NVIDIA

2015 | **Best bachelor's project**. NOVA University Lisbon

2015 | **1st place hackathon**. NOVA University Lisbon

Patents

2020 | **Incorporating a ternary matrix into a neural network**.
A. Keller, G. Mordido, M. Van keirsbilck. Filed

2019 | **Representing a neural network utilizing paths within the network to improve a performance of the neural network**.
A. Keller, G. Mordido, N. Gamboa, M. Van keirsbilck. US Patent App. 16/352,596

Publications

2022 **Improving meta-learning generalization with activation-based early-stopping.**
S. Guiroy, C. Pal, G. Mordido, S. Chandar. Under review
MemSE: Fast MSE prediction for noisy memristor-based DNN accelerators.
J. Kern, S. Henwood, G. Mordido, E. Dupraz, A. Aissa-El-Bye, Y. Savaria, F. Leduc-Primeau. Under review
Tiny CNN for seizure prediction in wearable biomedical devices.
Y. Zhang, Y. Savaria, S. Zhao, G. Mordido, M. Sawan, F. Leduc-Primeau. Under review

2021 **Compressing 1D time-channel separable convolutions using sparse random ternary matrices.**
G. Mordido, M. Keirsbilck, A. Keller. INTERSPEECH 2021
Evaluating post-training compression in GANs using locality-sensitive hashing.
G. Mordido, H. Yang, C. Meinel. Preprint
Assessing image and text generation with topological analysis and fuzzy logic.
G. Mordido*, J. Niedermeier*, C. Meinel. WACV 2021

2020 **Mark-Evaluate: Assessing language generation using population estimation methods**.
G. Mordido, C. Meinel. COLING 2020
Best student forcing: A simple training mechanism in adversarial language generation.
J. Sauder*, T. Hu*, X. Che, G. Mordido, H. Yang and C. Meinel. LREC 2020
Monte Carlo gradient quantization.
G. Mordido, M. Keirsbilck, A. Keller. CVPR 2020 EDLCV workshop
Improving the evaluation of generative models with fuzzy logic.
J. Niedermeier*, G. Mordido* and C. Meinel. AAAI 2020 Meta-Eval workshop
microbatchGAN: Stimulating diversity with multi-adversarial discrimination.
G. Mordido, H. Yang, and C. Meinel. WACV 2020

2019 **Instant quantization of neural networks using Monte Carlo methods.**
G. Mordido*, M. Keirsbilck*, A. Keller. NeurIPS 2019 EMC2 workshop

2018 **Pseudo-ground-truth for adversarial text generation using reinforcement learning**.
J. Sauder, X. Che, G. Mordido, H. Yang and C. Meinel. NeurIPS 2018 Deep RL workshop
Dropout-GAN: Learning from a dynamic ensemble of discriminators.
G. Mordido, H. Yang, and C. Meinel. KDD 2018 DL'Day

2017 **Automatic organisation, segmentation, and filtering of user-generated audio content**.
G. Mordido, J. Magalhaes, and S. Cavaco. MMSP 2017
Automatic organisation and quality analysis of user-generated content with audio fingerprinting.
G. Mordido, J. Magalhaes, and S. Cavaco. EUSIPCO 2017

Mentoring

2022 – Now	**Pranshu Malviya**. Ph.D. student, Mila - Quebec AI Institute & Polytechnique Montreal **Abdelrahman Zayed**. Ph.D. student, Mila - Quebec AI Institute, Polytechnique Montreal & Microsoft **Mojtaba Faramarzi**. Ph.D. student, Mila - Quebec AI Institute & University of Montreal **Simon Guiroy**. Ph.D. student, Mila - Quebec AI Institute & University of Montreal **Arjun Sudhakar**. Master's student, Mila - Quebec AI Institute & University of Montreal **Jonathan Kern**. Ph.D. student, Polytechnique Montreal **Sébastien Henwood**. Ph.D. student, Polytechnique Montreal **Yang Zhang**. Ph.D. student, Polytechnique Montreal **Batoul Sayegh**. Ph.D. student, Polytechnique Montreal
2021	**Philipp Hildebrandt**. Master's student, Hasso Plattner Institute
2020	**Cornelius Hagmeister**. Master's student, Hasso Plattner Institute
2019	**Julian Niedermeier**. Master's student, Hasso Plattner Institute
2018	**Jonathan Sauder**. Intern, Hasso Plattner Institute

Presentations

2021	**Oral presentation**. INTERSPEECH 2021 **Invited talk**. MIT **Oral presentation**. GTC 2021 **Spotlight presentation**. WACV 2021
2020	**Oral presentation**. COLING 2020 **Spotlight presentation**. CVPR 2020 EDLCV workshop **Spotlight and poster presentation**. WACV 2020 **Oral presentation**. AAAI 2020 Meta-Eval workshop
2019	**Oral and poster presentation**. NeurIPS 2019 EMC2 workshop
2018	**Poster presentation** at KDD 2018 DL'Day
2017	**Invited talk**. SAP TechEd 2017 **Poster presentation**. EUSIPCO 2017

Academic service

2022 **Organizing committee**. CoLLAs 2022 (1st conference edition)

2021 **Reviewer**. EMNLP 2021
External reviewer. Knowledge-Based Systems
External reviewer. CVPR 2021
Reviewer. EACL 2021

2020 **Reviewer**. ACL 2020
Reviewer. EMNLP 2020
Reviewer. WACV 2020

2019 **External reviewer**. Neural Computing and Applications
Reviewer. ICIS 2019

2018 **External reviewer**. IEEE Access

2017 **External reviewer**. IEEE Big Data 2017

Teaching

2022 **Neural networks: Architectures and applications** (graduate course, Polytechnique Montreal)
Guest Lecturer & Assignment Editor

2021 **Clean-IT: Towards sustainable digital technologies** (MOOC, openHPI)
Guest Lecturer

2020 **Practical applications of deep learning** (graduate course, Hasso Plattner Institute)
Teaching Assistant

2019 **Machine intelligence with deep learning** (graduate course, Hasso Plattner Institute)
Teaching Assistant

2018 **Competitive problem solving with deep learning** (graduate course, Hasso Plattner Institute)
Teaching Assistant

2017 **Machine intelligence with deep learning** (graduate course, Hasso Plattner Institute)
Teaching Assistant
Natural language generation using GANs (graduate project, Hasso Plattner Institute)
Teaching Assistant