



Micael Carvalho

Researcher in Machine Learning / Vision

Contact me

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Find me

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LinkedIn: [micael-carvalho](#)

Languages

Portuguese	Native
English	Fluent
French	Fluent
Spanish	Intermediate

Teaching

Embedded Sys. TA (2013)
Computer Org. TA (2014)
Arduino (2014, 2 x 2015)
Multimedia TA (2016)
Deep Learning TA (2016)
Visual Recognition TA (2017)

More

DjLu's creator
[bootstrap.pytorch](#)'s creator
Java SE6 certified 1Z0-851

Skills

Assembly, C, C++, CSS,
HTML, Java, JS, MATLAB,
PHP, Python, PyTorch, SQL,
TensorFlow & many more.
Non-exhaustive list.

Experience

- 2019 - now **Senior Machine Learning Scientist** [Tesla](#)
Autopilot vision.
- 2019 **Postdoctoral Research Fellow** [Simon Fraser University + Borealis AI](#)
Topics: latent spaces and generative models. Supervised by Greg Mori.
- 2018 **Research Intern (Vision)** [Tesla](#)
3 months Intern in the autopilot team, under the supervision of Andrej Karpathy.
- 2011 - 2013 **Software Developer** [Fundação para Inovações Tecnológicas](#)
2 years R&D for automated provisioning (telecom), public payphones with WiFi diffusion, development of internal libraries, & more.
- 2010 - 2011 **Software Development Intern** [FlySolution](#)
1 year ERP development using Java, Servlet, JSP, Hibernate, MySQL, & more.
- 2009 - 2010 **Software Developer (Volunteer)** [Núcleo de Desenvolvimento de Jogos Digitais](#)
2 years Development of digital games using C++, Delphi, and box2d. In charge of image processing, acquisition to segmentation. Video demo.

Education

- 11/15 - 12/18 **PhD in Computer Science / AI / Vision** [Sorbonne University / UPMC](#)
Supervisor: Matthieu Cord
Topics: Deep learning, image classification, feature space understanding, knowledge transfer, representation learning and metric learning.
Awards: Scholarship by CNPq, SIGIR travel grant.
- 11/14 - 02/15 **MSc int. scientific internship** [Pierre and Marie Curie University \(UPMC\)](#)
Supervisors: Matthieu Cord and Nicolas Thome.
- 03/13 - 07/15 **MSc in Electrical Engineering** [University of Campinas](#)
Supervisors: Eduardo Valle and Sandra Avila **GPA: 3.50**
Title: "Transfer Schemes for Deep Learning in Image Classification"
Topics: Transfer learning, automated melanoma screening, robustness of deep features, and representation techniques.
Awards: Scholarships (MSc) Samsung, (int. sci internship) Santander.
- 03/11 - 02/12 **Undergraduate research** [São Paulo State Technological College](#)
Dissertation's supervisor: José Luís Zem
Title: "Parallel and distributed programming in computer cluster."
- 03/09 - 12/12 **BSc of System Analysis and IT** [São Paulo State Technological College](#)
Dissertation's supervisor: Kleber de Oliveira Andrade **GPA: 3.25**
Title: "Artificial neural networks for facial emotions scanning."
Award: Best technical work at academic symposium. See video.
- 03/07 - 07/09 **Computer Technician + Specialization** [São Paulo State Technical School](#)
Topics: Databases, networks, programming, project management, & hardware. + Java programming, IBM's Rational and Websphere.

Extra

- 2017 **Reading group winner ([link](#))** [International Computer Vision Summer School](#)
- 2014 **Undergraduate co-orientation** [Nicholas Fanelli \(PUC-Campinas\)](#)
Title: Cryptographic key generation with a bio-inspired algorithm
- 2012 & 2015 **South America/Brazil Finalist** [International Collegiate Programming Contest](#)
- **Scientific Reviewer**
IEEE ICDEW/DECOR 2018, RFIAP 2018, BMVC 2019, IEEE TMM 2019, IEEE TMM 2020, ALGOCH 2020, CVPR 2020, BMVC 2020, ACCV 2020, WACV 2021
- **Outstanding Reviewer Award**
CVPR 2020, BMVC 2020

Bibliographic production

- 2019
AABI
[OpenReview](#) **Arbitrarily-conditioned Data Imputation**
[Micael Carvalho](#), Thibaut Durand, Jiawei He, Nazanin Mehrasa, Greg Mori.
2nd Symposium on Advances in Approximate Bayesian Inference.
- 2018
SIGIR
[arXiv](#), [DOI](#) **Cross-modal retrieval in the cooking context: Learning semantic text-image embeddings**
[Micael Carvalho](#)^{*}, Rémi Cadène^{*}, David Picard, Laure Soulier, Nicolas Thome, & Matthieu Cord.
International ACM SIGIR Conference on Research and Development in Information Retrieval.
- 2018
ICDE/DECOR
[arXiv](#), [slides](#) [DOI](#) **Images & Recipes: Retrieval in the cooking context**
[Micael Carvalho](#)^{*}, Rémi Cadène^{*}, David Picard, Laure Soulier, and Matthieu Cord.
IEEE International Conference on Data Engineering (ICDE), Data Engineering meets Intelligent Food and COoking Recipe (DECOR) workshop.
- 2017
ICVSS
[arXiv](#) **Inspiring Computer Vision System Solutions**
Julian Zilly, Amit Boyarski, [Micael Carvalho](#), Amir Atapour Abarghouei, Konstantinos Amplianitis, Aleksandr Krasnov, Massimiliano Mancini, Hernán Gonzalez, Riccardo Spezialetti, Carlos Sampedro Pérez, and Hao Li.
Winning entry for the reading group competition of the International Computer Vision Summer School (ICVSS).
- 2016
ICIP
[arXiv](#), [extra](#), [DOI](#) **Deep Neural Networks Under Stress**
[Micael Carvalho](#), Matthieu Cord, Sandra Avila, Nicolas Thome, and Eduardo Valle.
IEEE International Conference on Image Processing (ICIP), Phoenix, Arizona, USA.
- 2016
Tech. Report
[arXiv](#), [extra](#) **Towards Automated Melanoma Screening: Proper Computer Vision & Reliable Results**
Michel Fornaciali, [Micael Carvalho](#), Flávia Vasques Bittencourt, Sandra Avila, and Eduardo Valle.
- 2015
BRACIS
[PDF](#), [DOI](#) **Building up Conceptual Spaces: An ESOM Supported Strategy**
Suelen de Paula, [Micael Carvalho](#), and Ricardo Gudwin.
Brazilian Conference on Intelligent Systems (BRACIS), Natal, Brazil.
- 2014
SIBGRAPI
[PDF](#), [DOI](#) **Statistical Learning Approach for Robust Melanoma Screening**
Michel Fornaciali, Sandra Avila, [Micael Carvalho](#), and Eduardo Valle.
27th Conference on Graphics, Patterns and Images (SIBGRAPI), Rio de Janeiro, Brazil.