

Diogo Carbonera Luvizon

AI Researcher

Samsung R&D Institute Brazil

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Birth: 14th April 1989, Piraju (Brazil)

Academic research experience

2015–2019	Ph.D. in Computer Vision and Machine Learning , Paris-Seine University / University of Cergy-Pontoise, France.
April–July/ 2015	Exchange of research , QoSSTREAM project, Faculty of Technical Sciences – University of Novi Sad, Serbia.
2013–2015	M.Sc. in Applied Computing , Vehicle speed estimation by License plate detection and tracking, Federal University of Technology (UTFPR), Brazil.
2009–2010	Academic Internship , Prototyping and Tooling Group (NUFER), Federal University of Technology, Brazil.

Professional experience

2019–present	AI Researcher at Samsung.
2017–2018	Substitute professor (<i>vacataire</i>, about 90 hours) . Teaching for the 2nd and 3rd years of B.Sc. in Electronic Engineering as well as for Master's courses, including <i>Artificial intelligence for control (reinforcement learning)</i> , <i>Artificial intelligence (intro. to deep learning)</i> , <i>Parallel programming</i> , and <i>Software engineering</i> .
2011–2014	Development Engineer at Ensitec Tecnologia . Working on development engineering for a broad range of electronic products and systems, from ultra-low power projects to applications using image processing and computer vision algorithms.
2010–2011	Trainee Engineer at Velsis . Development of electronic equipments for vehicle speed measurement systems.

Education

2015–2019	Ph.D. in Computer Vision and Machine Learning , Paris-Seine University, France: “ <i>Machine Learning for Human Action Recognition and Pose Estimation based on 3D Information</i> ”.
2013–2015	M.Sc. in Applied Computing , Federal University of Technology (UTFPR), Brazil.
2007–2011	Electronics Engineering , emphasis in Electronics and Telecommunications, Federal University of Technology (UTFPR), Brazil.

Languages

Portuguese	Native proficiency
English	Professional working proficiency
French	Professional working proficiency (3.5 years living in France)

Professional services

Program committee

2020	Technical program committee of CVPR
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Reviewer activities

2018–present	Reviwer for IEEE Trans. on Multimedia, IEEE Signal Processing Letters, ACM Journal of Machine Learning Research
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Awards and prizes

2018	Best presentation award in the annual ETIS Lab workshop, 2018, France.
2016	1st prize on Workshop of Theses and Dissertations (WTD - Master), Conference on Graphics, Patterns and Images (SIBGRAPI), 2016, Brazil
2016	2nd prize on Concurso Latino-Americano de Dissertações de Mestrado (CLTM), Conferência Latino-Americana de Informática (CLEI), 2016, Chile.

Teaching experience

Machine Learning	Artificial Neural Networks, Reinforcement Learning
Computer Science	Parallel programming

Open source software *

deephar	Multitask human pose estimation and action recognition using deep learning (Python/TensorFlow)
pose-regression	2D human pose estimation framework (Python/TensorFlow)
harskel	Human action recognition from skeletal data (Matlab)
vehicle-dsm	Vehicle detection and speed measurement system from a single camera (C/C++)

* All my public source code are available at <https://github.com/dluvizon>

Publications

International journals

- [1] Diogo C. Luvizon, Hedi Tabia, and David Picard. Human pose regression by combining indirect part detection and contextual information. *Computers & Graphics*, 85:15 – 22, 2019.
- [2] Diogo Carbonera Luvizon, Hedi Tabia, and David Picard. Learning features combination for human action recognition from skeleton sequences. *Pattern Recognition Letters*, 99:13 – 20, 2017.
- [3] Diogo C. Luvizon, Bogdan T. Nassu, and Rodrigo Minetto. A Video-Based System for Vehicle Speed Measurement in Urban Roadways. *IEEE Transactions on Intelligent Transportation Systems (ITS)*, PP(99):1–12, 2016.
- [4] Neri Volpato, Alexandre Franzoni, Diogo C. Luvizon, and Julian M. Schramm. Identifying the Directions of a set of 2D Contours for Additive Manufacturing Process Planning. *The International Journal of Advanced Manufacturing Technology*, 68(1-4):33–43, 2013.

International conferences

- [1] Diogo C. Luvizon, David Picard, and Hedi Tabia. 2D/3D Pose Estimation and Action Recognition Using Multitask Deep Learning. In *The IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, June 2018.
- [2] D. C. Luvizon, B. T. Nassu, and R. Minetto. Vehicle speed estimation by license plate detection and tracking. In *XXIX SIBGRAPI - Conference on Graphics, Patterns and Images*, 2016. **1st prize** on the Workshop of Theses and Dissertations.
- [3] D. C. Luvizon, B. T. Nassu, and R. Minetto. Medição da velocidade de veículos por detecção e rastreamento da placa. In *XLII Conferencia Latinoamericana de Informática (CLEI)*, 2016. **2o lugar** no XXII Concurso Latinoamericano de Tesis de Maestría.
- [4] Diogo C. Luvizon, Bogdan T. Nassu, and Rodrigo Minetto. Vehicle Speed Estimation by License Plate Detection and Tracking. In *Acoustics, Speech and Signal Processing (ICASSP), 2014 IEEE International Conference on*, pages 6563–6567, May 2014.

Patents

- [1] D. C. Luvizon, R. Minetto, and B. T. Nassu. Sistema para Medição de Velocidade Instantânea e Média de Veículos por Reconhecimento de Padrões em Imagens e Vídeos Digitais. INPI - Instituto Nacional da Propriedade Industrial, Registro No. BR10201503191, 2015 (Brazil, in portuguese).

Master’s thesis

- [1] Diogo Carbonera Luvizon. Vehicle Speed Estimation by License Plate Detection and Tracking. Master’s thesis, Federal University of Technology – Parana, Brazil, July 2015.