Gabriel Guimarães Carvalho

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Education

Universidade Federal de Pernambuco – UFPE	Aug. 2019 – Present
PhD. Student in Computer Science	*Recife, BR*
Università di Roma "La Sapienza"	Feb. 2014 – Feb 2017
PhD. degree in Physics and Relativistic Astrophysics	*Rome, IT*
Universidade Federal de Pernambuco – UFPE	2011 – 2013
M.Sc. degree in Mathematics	*Recife, BR*
Universidade Federal de Pernambuco – UFPE	2008 – 2010
B.Sc. degree in Mathematics	*Recife, BR*

Experience

Computer Vision Data Scientist   Jul. 2021 – Present
SpaceTime Labs   *São Paulo/Remote, BR*
- Computer Vision and Image Processing
- Data preprocessing and Data Analysis
- Geographic Information System
- Multispectral Satellite Image Processing

Ph.D. Researcher   Sep. 2019 – Jun. 2021
Projeto CIn - Motorola   *Recife, BR*
- R&D of image processing and quality assessment tools
- Deep Learning research and engineering
- Data analysis and pre-processing

Postdoctoral Researcher   2017 – 2018
Universidade Federal Rural de Pernambuco – UFRPE   *Recife, BR*
- Alternative gravitational theories and geometric methods in Physics

Lecturer   Nov 2017 – Jul 2019
Universidade Federal de Pernambuco – UFPE   *Recife, BR*
- Calculus I, II, III
- Analytic Geometry
- Linear Algebra
- Calculus in one complex variable

Lecturer   Apr 2012 – Jan 2014
Universidade Federal de Pernambuco – UFPE   *Recife, BR*
- Calculus I, II
- Analytic Geometry

Publications

A Deep Learning Approach to Mobile Camera Image Signal Processing. WORKSHOP ON INDUSTRY APPLICATION - CONFERENCE ON GRAPHICS, PATTERNS AND IMAGES (SIBGRAPI), 33. , 2020, Evento Online. Anais. Porto Alegre: Sociedade Brasileira de Computação, 2020 . p. 225-231.
Jose Ivson S. Silva, Gabriel G. Carvalho, Marcel Santana Santos, Diego J. C. Santiago, Lucas Pontes de Albuquerque, Jorge F. Puig Battle, Gabriel M. da Costa, and Tsang Ing Ren

On the hypotheses of Penrose's singularity theorem under disformal transformations. Eur.Phys.J.C 80 (2020) 3, 265
Eduardo Bittencourt, Gabriel G. Carvalho, Iarley P. Lobo, and Leandro Santana

The geometry of null-like disformal transformations. Int.J.Geom.Meth.Mod.Phys. 16 (2019) 11, 1950180
Iarley Lobo and Gabriel G. Carvalho

Scalar field self-force effects on a particle orbiting a Reissner-Nordström black hole. Phys.Rev.D 94 (2016) 12, 124028
Donato Bini, Gabriel G. Carvalho, and Andrea Geralico

Extended disformal approach in the scenario of Rainbow Gravity. Phys.Rev.D 93 (2016) 4, 044005
Gabriel G. Carvalho, Iarley P. Lobo, and Eduardo Bittencourt

On the disformal invariance of the Dirac equation. Class.Quant.Grav. 32 (2015) 185016
Eduardo Bittencourt, Iarley P. Lobo, and Gabriel G. Carvalho

Technical Skills, Language Skills, and Interests

OS: Linux, macOS
Programming Languages: Python (proficient), C++ (familiar), Java (familiar), Matlab (familiar), Go (beginner)
Libraries: OpenCV, Pandas, Matplotlib, Numpy, Scipy, Tensorflow + Keras, Scikit-Image, Scikit-Learn, Pytorch, Geopandas, Rasterio
Version Control: Git
Writing: LaTeX, Office
Languages: Portuguese (native), English (fluent), Italian (conversational), Norwegian (beginner)
Interests: Computational Neuroscience, Computational Intelligence, Computer Vision and Image Processing, Mathematics, Travel, Music, Photography, Nature, Philosophy, Brazilian Jiu-Jitsu

Extracurricular

Specialization: Deep Learning by DeepLearning.AI on Coursera. Certificate earned at July 12, 2020

Specialization: Mathematics for Machine Learning by Imperial College London on Coursera. Certificate earned at Dec. 12, 2020

Course: Machine Learning by Stanford University on Coursera. Certificate earned at Mar. 18, 2021