

João Pedro **Moreira Ferreira**

SOFTWARE ENGINEER · COMPUTER VISION ENGINEER · MACHINE LEARNING ENGINEER · DATA SCIENTIST

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Work Experience

Eldorado Research Institute

Campinas, Brazil

SOFTWARE ANALYST

Dez. 2020 - Present

- Research and develop algorithms for image and video enhancement in smartphones. Some of them in real time.
- Explore Deep Learning and Classical Image Processing techniques.
- Research and develop generative approaches for faces.
- Creation and curation of dataset to be used to train deep learning models.
- Design and develop pipelines for CI (Continuous Integration).
- Define good practices in machine learning to be used throughout a company.
- Design and implement a library for forecasting time series.

Unifeso

Teresópolis, Brazil

PROFESSOR

Mar. 2022 - Present

- Coordinate a research and extension laboratory.
- Tutorship of final undergrad final project.

UFMG - VeRLab/Petrobras

Belo Horizonte, Brazil

RESEARCHER/DEVELOPER

Dez. 2018 - Dez. 2020

- Research and develop state-of-the-art techniques to solve problems related to the reconstruction of construction sites, the schedule of construction sites, and teleoperation on construction sites.
- Design and develop systems to automatize the pipeline of reconstruction of a construction site.
- Design and develop hardware to collect data using a UGV (Unmanned Ground Vehicles), that also can be used by a human user.

Teaching Experience

UFMG - Computational Linear Algebra

Belo Horizonte, Brazil

ASSISTANT

2019

- Weekly meetings of 1-hour duration, to solve questions and help undergrad students with theoretical and practical exercises.
- Prepare and correct theoretical and practical exercises, help professors on the correction of exams.
- Teach a class about PageRank.
- Class with 180 students.

UFMG - Introduction to Visual Computing/Computer Vision

Belo Horizonte, Brazil

ASSISTANT

2019

- Teach classes about Machine Learning on Visual Computing to undergrad students.
- Help on the preparation of classes.

UFSJ - Analytical Geometry

São João del-Rei, Brazil

ASSISTANT

2015

- Weekly meetings of 2-hour duration, to solve questions and help undergrad students with theoretical and practical exercises.
- Class with 90 students.

Education

UFMG (Universidade Federal de Minas Gerais)

Belo Horizonte, MG - Brazil

M.Sc IN COMPUTER SCIENCE

Aug. 2018 - Oct. 2020

- Synthesizing Realistic Human Dance Motions Conditioned by Musical Data using Graph Convolutional Networks.

- Reconhecimento automatico de pistas para veículos autonomos utilizando técnicas de visão computacional.

Honors & Awards

2021	Best M.Sc. Dissertation Award in the WTD in Graphics, Patterns and Images , SIBGRAPI	Online
2021	Finalist of the Best M.Sc. Dissertation Award , Brazilian Computing Society's Congress	Online
2017	Honroable Mention , Symposium on Virtual and Augmented Reality	Curitiba, Brazil
2013	First Certificate in English , Cambridge English Qualifications	Cambridge, UK

Publications

International Journal of Computer Vision

Volume 129

A SHAPE-AWARE RETARGETING APPROACH TO TRANSFER HUMAN MOTION AND APPEARANCE IN MONOCULAR

VIDEOS

Apr. 2021

- Computer Vision; Computer Graphics; Motion Transfer.

Computers & Graphics

Volume 94

LEARNING TO DANCE A GRAPH CONVOLUTIONAL ADVERSARIAL NETWORK TO GENERATE REALISTIC DANCE MOTIONS

FROM AUDIO

Feb. 2021

- Computer Vision; Computer Graphics; Motion Synthesis.

Winter Conference on Applications of Computer Vision

Aspen, CO, United States

DO AS I DO TRANSFERRING HUMAN MOTION AND APPEARANCE BETWEEN MONOCULAR VIDEOS WITH SPATIAL AND

TEMPORAL CONSTRAINTS

Mar. 2020

- Computer Vision; Computer Graphics; Motion Transfer.

Rio Oil & Gas Expo and Conference 2020

Rio de Janeiro, Brazil

CONNECTING REAL WORLD AND "DIGITAL TWINS" WITH MULTIVISÃO SYSTEM

Dec. 2020

- Computer Vision; Robotic; SLAM.

International Conference on Computational Science and its Applications

Melbourne, Australia

AN RGB-BASED GESTURE FRAMEWORK FOR VIRTUAL REALITY ENVIRONMENTS

Jul. 2018

- Digital Image Processing; Computer Vision; Virtual and Augmented Reality.

Symposium on Virtual and Augmented Reality

Curitiba, Brazil

UMA ABORDAGEM PARA DETECÇÃO GESTOS VOLTADA A AMBIENTES DE REALIDADE VIRTUAL E AUMENTADA

Nov. 2017

- Digital Image Processing; Computer Vision; Virtual and Augmented Reality.

International Symposium on Computer Music Multidisciplinary Research

São Paulo, Brazil

THE FRAMEWORK OF COPISTA AN OMR SYSTEM FOR HISTORICAL MUSIC COLLECTION RECOVERY

Jul. 2016

- Digital Image Processing; Computer Vision; Virtual and Augmented Reality.

Languages

Portuguese, Native Speaker**English**, Near native / Fluent

Skills

Main Skills, Computer Vision, Machine Learning, Algorithms and Data Structure.

Programming Languages, Python, Java, JavaScript, C, C++.

Management Software, Singularity, Docker, Git, Kubernetes.

Libraries/Frameworks, OpenCV, PyTorch, Tensorflow.