

João Pedro **Moreira Ferreira**

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

Brazilian

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🏠 <https://jpeumesmo.github.io/>

📁 jpeumesmo

📺 João Pedro

Work Experience

Eldorado Research Institute

Campinas, Brazil

SOFTWARE ANALYST

Dez. 2020 - Present

- Creation and curation of datasets to be used to train deep learning models. Research and develop generative models for face enhancement to be shipped on high-end laptops.
- Developed and implemented a unified time series forecasting library. The library would be used by teams working predicting sales for the company. Define good practices in machine learning for those teams and help them automate their processes.
- Leveraged expertise in both Deep Learning and Classical Image Processing to develop high-performance algorithms for real-time image and video enhancement on smartphones. Additionally, established and maintained robust Continuous Integration (CI) pipelines to ensure efficient and reliable software delivery.

Unifeso

Teresópolis, Brazil

PROFESSOR

Mar. 2022 - Mar. 2025

- Led and mentored undergraduate final projects, guiding students through the research life cycle from conceptualization to successful delivery of their undergraduate thesis.
- Coordinated a research and extension laboratory, overseeing operations, managing resources, and fostering collaborative initiatives.

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.

Education

UFMG (Universidade Federal de Minas Gerais)

Belo Horizonte, MG - Brazil

PH.D. IN COMPUTER SCIENCE

Mar 2025 - Present

- To be defined.

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.

UFSJ (Universidade Federal de São João del-Rei)

São João del-Rei, MG - Brazil

B.SC IN COMPUTER SCIENCE

Mar. 2014 - Jul. 2018

- 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 **Honorable Mention**, Symposium on Virtual and Augmented Reality

Curitiba, Brazil

Certifications

2025 **SCRUM Master**, SCRUM Alliance

USA

2013 **First Certificate in English**, Cambridge English Qualifications

Cambridge, UK

Publications

Computers & Graphics

Volume 124

EMPOWERING SIGN LANGUAGE COMMUNICATION: INTEGRATING SENTIMENT AND SEMANTICS FOR FACIAL
EXPRESSION SYNTHESIS

Nov. 2024

- Computer Vision; Computer Graphics; Sing Language Production.

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, Pytorch Lightning.

Cloud, AWS, Azure, Databricks.