FELIPE CADAR CHAMONE

PhD Student

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I am a computer science Ph.D. student at the Federal University of Minas Gerais (UFMG). I have been doing scientific research at the Laboratory of Computer Vision and Robotics (VeRLab) since I joined the CS Graduation in the first semester of 2016. I really enjoy doing research and would love to see my work positively impact someone's life.

PROJECTS

Semantic Hyperlapse

VeRLab

April 2016 – September 2018 UFMG, Belo Horizonte, Minas Gerais

In this project, I was part of a team developing a semantic fast-forward method for first-person videos to emphasize important parts while maintaining smooth motion.
More info in https://www.verlab.dcc.ufmg.br/semantic-hyperlapse/

Keywords: Semantic Hyperlapse | Sparse Coding | Convolutional Neural Networks | Multimodal Dataset

Advanced Teleoperation of Mining Equipment: Excavator

VeRLab/ITV-Intituto Tecnológico Vale/UFMG

November 2017 – February 2020 UFMG, Belo Horizonte, Minas Gerais

The main objective of this project is to investigate the problem of the remote operation of mining equipment and propose a system aiming to increase safety and productivity.
More info in https://www.verlab.dcc.ufmg.br/advanced-teleoperation-of-mining-equipment-bulldozer/

Keywords: Teleoperation | Mobile Platform | Virtual Reality | Haptic Feedback

Multivisão

VeRLab/Petrobras/UFMG

February 2020 – November 2021 UFMG, Belo Horizonte, Minas Gerais

The main objective of this project is to ensure safety in oil extraction platforms using Action Recognition .
More info in https://www.verlab.dcc.ufmg.br/advanced-teleoperation-of-mining-equipment-bulldozer/

Keywords: Teleoperation | GNN | Real Time

Nonrigid Local Features

VeRLab

June 2018 – Today UFMG, Belo Horizonte, Minas Gerais

In this project, we focus on improving local image description of surfaces of non-rigid objects and scenes.
More info in https://www.verlab.dcc.ufmg.br/descriptors/

Keywords: Local Features | Detectors | RGB-D Dataset | Nonrigid

I'M PROUD OF

18th Place on the Google Image Matching Challenge 2022

I promoted a workshop at the Google's Mind the Gap event
"Programming for HoloLens"

Every year I volunteer for UFMG's "Mostra sua UFMG" to help high school students choose a course"

STRONG POINTS

Hard-working | Attention to details | Search for learning | Team Worker

Computer Vision | Machine Learning | Robotics

PROGRAMMING SKILLS

Python	●●●●●
C	●●●●●
C++	●●●●○
C#	●●●●○
CUDA	●●●○○
Matlab	●●●○○
JavaScript	●●●○○

OpenCV | PyTorch | Git | ROS | Unity

FOREIGN LANGUAGE

English	●●●●○
French	●●○○○

EDUCATION

Ph.D.

UFMG

November 2021 – Today

Graduation

UFMG

February 2016 – 2021

PUBLICATIONS

Journal Articles

- Junior, Sergio N. Silva et al. (2018). “A 3D modeling methodology based on a concavity-aware geometric test to create 3D textured coarse models from concept art and orthographic projections”. In: *Computers & Graphics* 76, pp. 73–83. DOI: 10.1016/j.cag.2018.09.002. URL: https://doi.org/10.1016/j.cag.2018.09.002.
- Silva, Michel M. et al. (2018). “Making a long story short: A Multi-Importance fast-forwarding egocentric videos with the emphasis on relevant objects”. In: *Journal of Visual Communication and Image Representation* 53, pp. 55–64. ISSN: 1047-3203. DOI: 10.1016/j.jvcir.2018.02.013.

Conference Proceedings

- Potje, Guilherme et al. (2021). “Extracting Deformation-Aware Local Features by Learning to Deform”. In: *Advances in Neural Information Processing Systems*. Ed. by M. Ranzato et al. Vol. 34. Curran Associates, Inc., pp. 10759–10771. URL: https://proceedings.neurips.cc/paper/2021/file/5934c1ec0cd31e12bd9084d106bc2e32-Paper.pdf.
- Lima, Matheus de et al. (2019). “Realimentação de Força para Teleoperação de Escavadeiras”. In: *Anais do 14º Simpósio Brasileiro de Automação Inteligente*. Galoa.
- Rezeck, Paulo, Felipe Cadar, et al. (2018). “An Immersion Enhancing Robotic Head-Like Device for Teleoperation”. In: *2018 Latin American Robotic Symposium, 2018 Brazilian Symposium on Robotics (SBR) and 2018 Workshop on Robotics in Education (WRE)*. IEEE. DOI: 10.1109/lars/sbr/wre.2018.00038. URL: https://doi.org/10.1109/lars/sbr/wre.2018.00038.
- Rezeck, Paulo, Bruna Frade, et al. (2018). “Framework for Haptic Teleoperation of a Remote Robotic Arm Device”. In: *2018 Latin American Robotic Symposium, 2018 Brazilian Symposium on Robotics (SBR) and 2018 Workshop on Robotics in Education (WRE)*. IEEE. DOI: 10.1109/lars/sbr/wre.2018.00039. URL: https://doi.org/10.1109/lars/sbr/wre.2018.00039.
- Silva, M. M. et al. (2018). “A Weighted Sparse Sampling and Smoothing Frame Transition Approach for Semantic Fast-Forward First-Person Videos”. In: *2018 IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. Salt Lake City, USA, pp. 2383–2392. ISBN: 978-1-5386-6420-9. DOI: 10.1109/CVPR.2018.00253.