

MAIKO M. I. LIE

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EDUCATION

- 2018 – current** PhD student in Computer Science, Federal University of Minas Gerais, Brazil.
- 2018** MSc. degree in Computer Engineering, Federal University of Technology – Paraná, Brazil.
Thesis: *An Efficient Strategy for Estimation of Visually Salient Regions in Images*
- 2016** B.E. degree in Computer Engineering, Federal University of Technology – Paraná, Brazil.
Thesis: *A Platform for Development of Analytical Telerobotics*

PROFESSIONAL EXPERIENCE

Samsung R&D Institute Brazil (SRBR)

- 2022 – current** | AI Researcher at the AI R&D Lab. Research and development of AI solutions for health analytics.

Federal University of Minas Gerais, Brazil

- 2021 – 2022** | Graduate research assistant. Data analysis of geophysical data for stratigraphic modeling, under a project for the Brazilian Petroleum Corporation — *Petrobras*.
- 2019 – 2021** | Graduate research assistant. Research and development in visual pattern recognition, focused on biometrics for surveillance, under a project for the Brazilian Petroleum Corporation — *Petrobras*.
- 2018 – 2019** | Graduate research assistant. Research and development in visual pattern recognition, focused on video analytics for vehicle cabin monitoring, under a project for *Maxtrack*.
- 2018 – current** | PhD student at the *Smart Sense Laboratory*. Research and development in visual pattern recognition for forensics and biometrics.

Federal University of Technology – Paraná, Brazil

2016 – 2018	Master's student at the <i>Imaging and Electronic Instrumentation Laboratory</i> , with a fellowship from the Brazilian Coordination for the Improvement of Higher Education Personnel (CAPES). Research on perception-based algorithms for accelerating computer vision tasks.
2014 – 2015	Undergraduate research assistant at the <i>Imaging and Electronic Instrumentation Laboratory</i> , with a fellowship from the Araucária Foundation. Research on perception-based algorithms for accelerating computer vision tasks.
2013 – 2014	Undergraduate research assistant, with a scholarship from the Brazilian National Council for Scientific and Technological Development (CNPq). Research on the optimization of a discrete event simulation software library.
2012 – 2013	Undergraduate research assistant. Development of a microcontrolled biomedical system for infusion pump calibration.

LANGUAGES

Portuguese	Advanced reading, writing and speaking. Native proficiency.
English	Advanced reading and writing, fluent speaking. TOEFL ITP Test score (2014): 670/677. Proficient User/Effective Operational Efficiency according to the Common European Framework of Reference for Languages (CEFR).

PUBLICATIONS

Conference papers

2020	JORDAO, A.; LIE, M.; DE MELO, V. H. C.; SCHWARTZ, W. R. Covariance-Free Partial Least Squares: An Incremental Dimensionality Reduction Method . IEEE Winter Conference on Applications of Computer Vision (WACV).
	JORDAO, A.; AKIO, F.; LIE, M.; SCHWARTZ, W. R. Depth-Wise Neural Architecture Search . International Conference on Pattern Recognition (ICPR).
2017	LIE, M. M. I.; VIEIRA NETO, H.; BORBA, G. B.; GAMBA, H. R. Progressive Saliency-Oriented Object Localization Based on Interlaced Random Color Distance Maps . Latin American Robotics Symposium (LARS).
2016	LIE, M. M. I.; VIEIRA NETO, H.; BORBA, G. B.; GAMBA, H. R. Automatic Image Thumbnailing Based on Fast Visual Saliency Detection . Brazilian Symposium on Multimedia and the Web (WebMedia).
	LIE, M. M. I.; BORBA, G. B.; VIEIRA NETO, H.; GAMBA, H. R. Fast Saliency Detection Using Sparse Random Color Samples and Joint Upsampling . Conference on Graphics, Patterns and Images (SIBGRAPI). <i>Awarded an Honorable Mention</i> .

Journal papers

- 2025 | LIE, M.; BELTRAME, T.; COSTA, V.T.D.M., ALVES, G.T.; GOIS, M.O.; CHIKUI, E.K.; JUNIOR, J.L.O.; PINTO, P.R.; ANGELONI, M.A. **Predicting Health-related Physical Fitness from Smartwatch Data**. IEEE Sensors Letters.
- 2020 | JORDAO, A.; LIE, M.; SCHWARTZ, W. R. **Discriminative Layer Pruning for Convolutional Neural Networks**. IEEE Journal of Selected Topics in Signal Processing.
- 2017 | LIE, M. M. I.; BORBA, G. B.; VIEIRA NETO, H.; GAMBA, H. R. **Joint Upsampling of Random Color Distance Maps for Fast Salient Region Detection**. Pattern Recognition Letters.
- KREFER, A. G.; LIE, M. M. I.; BORBA, G. B.; GAMBA, H. R.; ABREU DE SOUZA, M. A. **A Method for Generating 3D Thermal Models with Decoupled Acquisition**. Computer Methods and Programs in Biomedicine.

PROFESSIONAL SERVICE

Journal Reviewer

- 2025 – current | IEEE Transactions on Industrial Informatics
- 2025 – current | IEEE Transactions on Systems, Man, and Cybernetics: Systems
- 2025 – current | IEEE Transactions on Emerging Topics in Computational Intelligence
- 2025 – current | IEEE Signal Processing Letters
- 2024 – current | Artificial Intelligence Review (Springer Nature)
- 2024 – current | Signal, Image, and Video Processing (Springer Nature)
- 2024 – current | WIREs (Wiley Interdisciplinary Reviews) Computational Statistics
- 2024 – current | Scientific Reports (Springer Nature)
- 2023 – current | Neural Processing Letters (Springer Nature)
- 2023 – current | Pattern Analysis and Applications (Springer Nature)
- 2023 – current | Multimedia Systems (Springer Nature)
- 2023 – current | PLOS One
- 2023 – current | IET Computer Vision
- 2023 – current | IEEE Sensors
- 2022 – current | IEEE Transactions on Neural Networks and Learning Systems
- 2021 – current | IEEE Transactions on Image Processing
- 2019 – current | IEEE Transactions on Information Forensics and Security
- 2019 – current | The Visual Computer (Springer Nature)

Conference Reviewer

- 2026 | Conference on Neural Information Processing Systems (NeurIPS)
- 2024, 2026 | European Conference on Computer Vision (ECCV)

2024–2025	Workshop de Visão Computacional (WVC)
2023	Conference on Graphics, Patterns and Images (SIBGRAPI)
2023	Brazilian Conference on Intelligent Systems (BRACIS)
2022, 2024, 2026	IAPR International Conference Pattern Recognition (ICPR)
2021, 2023–2026	IEEE International Conference on Automatic Face and Gesture Recognition
2020–2026	IEEE Winter Conference on Applications in Computer Vision (WACV)

AWARDS

2016	Honorable Mention for the paper “Fast Saliency Detection Using Sparse Random Color Samples and Joint Upsampling” , at the 29th Conference on Graphics, Patterns and Images (SIBGRAPI).
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