# 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**

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

**Federal University of Minas Gerais, Brazil**

**2021 – 2022** | Research assistant. Data analysis of geophysical data for stratigraphic modeling, under a project for the Brazilian Petroleum Corporation — *Petrobras*.

**2019 – 2021** | 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** | 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**

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| **2016 – 2018** | Master's student at the *Imaging and Electronic Instrumentation Laboratory*, 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 *Imaging and Electronic Instrumentation Laboratory*, 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

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| **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). |

## PROFESSIONAL SERVICE

### Journal Reviewer

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| **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

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|---|---|
| **2023** | Brazilian Conference on Intelligent Systems (BRACIS) |
| **2022** | IAPR International Conference Pattern Recognition |
| **2021** | IEEE International Conference on Automatic Face and Gesture Recognition |
| **2020 – 2022** | IEEE Winter Conference on Applications in Computer Vision |

## 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). *Awarded an Honorable Mention*.

### Journal papers

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 Method for Generating 3D Thermal Models with Decoupled Acquisition**. Computer Methods and Programs in Biomedicine.

## AWARDS

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