

# GABRIEL JONAS AGUIAR

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## EDUCATION

<b>Virginia Commonwealth University</b> , Richmond, Virginia Ph.D. in Computer Science Thesis: Learning from imbalanced and active learning on drifting data streams.	Enrolled: 2021 — Expected: 2024 Overall GPA: 4.00
<b>Londrina State University</b> , Londrina, Brazil Master of Science in Computer Science Dissertation: A meta-learning approach for selecting image segmentation algorithm	Enrolled: 2018 — Graduated: 2020 Overall GPA: 4.00
<b>Londrina State University</b> , Londrina, Brazil Bachelor of Science in Computer Science Dissertation: Enhancing contrast in digital images through AI. (PT-BR: <i>Melhoria de contraste em imagens digitais baseada em inteligencia artificial</i> )	Enrolled: 2014 — Graduated: 2017 Overall GPA: 4.00

## PROFESSIONAL EXPERIENCE

<b>Research Assistant</b> <i>Virginia Commonwealth University</i> <ul style="list-style-type: none"><li>Collaborated with a team of researchers to develop and implement cutting-edge algorithms and models for data stream analysis and online learning, with a focus on identifying and addressing challenges related to imbalanced data and semi-supervised learning.</li></ul>	Richmond, Virginia Aug 2021 - date
<b>Resident Researcher</b> <i>SENAI (National Service of Industrial Training)</i> <ul style="list-style-type: none"><li>Developed and deployed machine learning models for the Brazilian industry, leveraging advanced algorithms and techniques to optimize production processes and improve efficiency.</li></ul>	Londrina, Brazil May 2020 - July 2021
<b>Intern Programmer</b> <i>Agropixel</i> <ul style="list-style-type: none"><li>Developed software for vegetative analysis that utilized advanced algorithms and techniques to analyze hyperspectral satellite images.</li></ul>	Londrina, Brazil Feb 2017 - Dec 2017

## SKILLS

- Programming:** Python, JavaScript, R, SQL, Java, C/C++, HTML, CSS
- Libraries:** scikit-learn, PyTorch, river, Flask, pandas, xgboost, ggplot, d3
- Communication:** Pro-active, Problem solving, Collaboration

## LANGUAGES

- Portuguese.** Native
- English.** Fluent
- Spanish.** Basic

## SCIENTIFIC PRODUCTION INDICATORS

- ORCID: 0000-0001-8162-5069
- Google Scholar: <https://scholar.google.com/citations?user=GbkOmQUAAAAJ&hl=en>
- ResearchGate: <https://www.researchgate.net/profile/Gabriel-Aguiar-3>
- Indexed papers: 9 (January 30, 2024)
- Pre-prints: 1 (January 30, 2024)
- h-index: 5 (January 30, 2024)
- Total citations: 183 (January 30, 2024)

## PUBLICATIONS

### Journals

- Aguiar, G.J.; Cano A. **A comprehensive analysis of concept drift locality in data streams.** arXiv, Submitted to Knowledge-based Systems, 2024, Elsevier.
- Aguiar, G.J.; Cano A. **Dynamic budget allocation for sparsely labeled drifting data streams.** Information Sciences, 2023, Elsevier.

3. Aguiar, G.J.; Krawczyk B.; Cano A. **A survey on learning from imbalanced data streams: taxonomy, challenges, empirical study, and reproducible experimental framework**. Machine Learning, 2023, Springer.
4. Junior, S.B.; Guido, R.C.; Aguiar, G.J.; Santana, E.J.; Junior, M.L.P.; Patil, H.A. **Multiple voice disorders in the same individual: Investigating handcrafted features, multi-label classification algorithms, and base-learners**. Speech Communication, 2023, Elsevier.
5. Aguiar, G.J.; Santana E.J.; de Carvalho, A.C.P.F.L.; Barbon, S.. **Using Meta-Learning for Multi-target Regression**. Information Sciences, 2022, Elsevier.
6. Aguiar, G.J.; Mantovani, R.G.; Mastelini, S.M.; de Carvalho, A.C.P.F.L.; Campos, G.F.C.; Barbon, S.. **A meta-learning approach for selecting image segmentation algorithm**, Pattern Recognition Letters, 2019, Elsevier.
7. Campos, G.F.C.; Mastelini, S.M.; Aguiar, G.J.; Mantovani, R.G.; de Melo, L.F.; Barbon, S.. **Machine learning hyperparameter selection for Contrast Limited Adaptive Histogram Equalization**, EURASIP Journal on Image and Video Processing, 2019, Springer.

## Conferences

1. Aguiar, G. J.; Santana, E. J.; Mastelini, S. M.; Mantovani, R. G.; Barbon, S.. **Towards meta-learning for multi-target regression problems**. In 2019 8th Brazilian Conference on Intelligent Systems (BRACIS). IEEE.
2. Aguiar, G. J.; Cano, A.. **An active learning budget-based oversampling approach for partially labeled multi-class imbalanced data streams**. In 2023 38th ACM/SIGAPP Symposium on Applied Computing.
3. Aguiar, G. J.; Cano, A.. **Enhancing Concept Drift Detection in Drifting and Imbalanced Data Streams through Meta-Learning**. In 2023 IEEE Conference on Big Data Workshops.