GABRIEL JONAS AGUIAR

Richmond, Virginia — gja.gbrl@gmail.com —linkedin.com/in/gabrieljonas/

EDUCATION

Virginia Commonwealth University, Richmond, Virginia — Enrolled: 2021 — Expected: 2024
Ph.D. in Computer Science — Overall GPA: 4.00
Thesis: Learning from imbalanced and active learning on drifting data streams.

Londrina State University, Londrina, Brazil — Enrolled: 2018 — Graduated: 2020
Master of Science in Computer Science — Overall GPA: 4.00
Dissertation: A meta-learning approach for selecting image segmentation algorithm

Londrina State University, Londrina, Brazil — Enrolled: 2014 — Graduated: 2017
Bachelor of Science in Computer Science — Overall GPA: 4.00
Dissertation: Enhancing contrast in digital images through AI.
(PT-BR: *Melhoria de contraste em imagens digitais baseada em inteligencia artificial*)

PROFESSIONAL EXPERIENCE

Research Assistant — Richmond, Virginia
Virginia Commonwealth University — Aug 2021 - date

- 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.

Resident Researcher — Londrina, Brazil
SENAI (National Service of Industrial Training) — May 2020 - July 2021

- Developed and deployed machine learning models for the Brazilian industry, leveraging advanced algorithms and techniques to optimize production processes and improve efficiency.

Intern Programmer — Londrina, Brazil
Agropixel — Feb 2017 - Dec 2017

- Developed software for vegetative analysis that utilized advanced algorithms and techniques to analyze hyperspectral satellite images.

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.** Conversational

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 (November 27, 2023)
- Pre-prints: 1 (November 27, 2023)
- h-index: 5 (November 27, 2023)
- Total citations: 154 (November 27, 2023)

PUBLICATIONS

Journals

1. Aguiar, G.J.; Cano A. **A comprehensive analysis of concept drift locality in data streams**. arXiv, Submitted to Expert Systems with Applications, 2024, Elsevier.
2. 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.