

ROGERIO PIGNELLI

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📍 Cornélio Procópio, Paraná, Brazil

EDUCATION

Federal Technological University of Paraná 2023 - 2025
Master of Science in Electrical Engineering 10/10
Thesis: Feature Selection and Explainability in Automatic Detection and Classification of Laryngeal Pathologies
Advisor: Paulo Rogério Scalassara

Federal Technological University of Paraná 2017 - 2023
Bachelor of Electrical Engineering 8/10
Thesis: Wavelet-packet features for Reinke's edema identification
Advisors: María Eugenia Dajer and Danilo Hernane Spatti

PUBLICATIONS

Conference Proceedings

Pignelli R., Scalassara, P. R., Dajer, M. E. and Spatti, D. H. **Feature Selection and Comparison of Classifiers for Reinke's Edema Identification**, 2024 IEEE 22nd Mediterranean Electrotechnical Conference (MELECON), Porto, Portugal, 2024, pp. 317-322, doi: <https://dx.doi.org/10.1109/MELECON56669.2024.10608503>

Pignelli, R., Castoldi, M. F., Dajer, M. E., Spatti, D. H. and Scalassara, P. R. **Binary optimization algorithms applied to multilayer perceptron hyperparameter selection for Reinke's edema identification** [Original title in Portuguese]. In Proceedings of the Brazilian Congress of Biomedical Engineering (CBEB). Rio de Janeiro: SBEB, 2024.

Pignelli, R., de Souza, W. A., & Scalassara, P. R. (Under review). **Comparison of convolutional networks for classification of vocal disorders using subsampled voice signals** [Original title in Portuguese]. Manuscript submitted for publication in the proceedings of the 2025 Brazilian Symposium on Intelligent Automation (SBAI).

RESEARCH EXPERIENCE

Federal Technological University of Paraná Aug 2023 - Jul 2025
MSc. Researcher

- SHAP values for interpreting features and evaluating impact of glottal features in voice disorder classification
- Metaheuristic algorithms for selecting MLP hyperparameters in Reinke's edema detection
- Wavelet-packet features extraction and selection for Reinke's edema detection
- MFCC features for classification of voice disorders using CNN and subsampled voice signals

INDUSTRY EXPERIENCE

Tata Consultancy Services (Bayer) Mar 2022 - Aug 2023
RPA Analyst - Outsource to USA team

- Implemented and supported RPA robots to automate critical processes within Supply Chain Management, specifically focusing on SAP, Salesforce, and SharePoint applications
- Collaborated to migrate the UiPath platform, including robots, Orchestrator, and database, from on-premises infrastructure to Azure cloud
- Configured and deployed UiPath robots in the Azure environment

Software Development Intern

- Contributed as a member of an internship team dedicated to designing and developing an application on AWS to enhance managers' efficiency in resource allocation for RMG (Resource Management Group) tasks

Ahri - Energy Solutions

Aug 2021 - Mar 2022

Operations Analyst

- Created 3D models of buildings' rooftop for photovoltaic production estimation based on drone photographs
- Automated daily routines by integrating Google Sheets and Google Presentations using Google Apps Script. Generated PDF business proposals for enhanced efficiency
- Designed and deployed websites using WordPress

RELEVANT COURSEWORK

Digital Signal Processing, Intelligent Systems, Adaptive Filtering, Machine Learning in Python, Optimization Methods, Control Theory, Embedded Systems and Data Science

TECHNICAL SKILLS

Programming: Python, MATLAB, C/C++, Bash, SQL, MySQL, VB.NET, C#

Software & Tools: numpy, scikit-learn, pandas, matplotlib, seaborn, PyTorch, TensorFlow, Azure, AWS, Linux, git, Excel, PowerBI, Agisoft Metashape

Languages: Portuguese: Native language
English: Professional proficiency
Spanish: Strong reading and comprehension
Italian: Basic proficiency

COURSES AND CERTIFICATES

AWS

- AWS Partner Technical Accreditation
- AWS Partner Cloud Economics Accreditation

UiPath

- RPA Developer certificate