

# ROGERIO PIGNELLI

in rogerio-pignelli

🔗 rogeriopignelli.github.io

✉ rpinhelli@alunos.utfpr.edu.br

📍 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

## 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

## COURSES AND CERTIFICATES

---

### AWS

- AWS Partner Technical Accreditation
- AWS Partner Cloud Economics Accreditation

### UiPath

- RPA Developer certificate