

# FABIO PIGNELLI

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## Professional Experience

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| Jan 2026 – ....     |  <b>Research Visitor</b> - University of Padua (UNIPD)  |
| Dec 2024 – Oct 2025 |  <b>Lecturer</b> - State University of Maringá (UEM)  |
| May 2023 – Jan 2026 |  <b>Pedagogical Coordinator   Lecturer</b> - Cidade Verde University (UniCV)<br>Head of IT courses  |
| Jul 2021 – May 2023 |  <b>Software Developer</b> - Stationsoft Consultancy and System Development<br>Client was a key player in the agribusiness sector in Brazil |

## Education

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| Mar 2025 – ....     |  <b>D.Sc. in Computer Science</b> – State University of Maringá (UEM)<br>Stay: University of Padua (UNIPD)<br>Advisors: Yandre M.G. Costa, and Lucas O. Teixeira  |
| Mar 2018 – Jun 2021 |  <b>M.Sc. in Computer Science</b> – State University of Maringá (UEM)<br>Title: <i>Cognitive Inspired Model as Data Augmentation for Writer Identification using the Document Filter Protocol</i><br>Grant: <i>Coordination for the Improvement of Higher Education Personnel (CAPES)</i><br>Advisors: Diego Bertolini, and Yandre M.G. Costa |
| Feb 2014 – Dec 2017 |  <b>B.Sc. in Computer Science</b> – Ingá University (UNINGÁ)<br>Title: <i>Breast Cancer Detection using Convolutional Neural Networks</i><br>Advisors: Claudia Heidemann, and Lucas O. Teixeira   |

## Publications

- 1 Pignelli, F., Costa, Y. M. G., & Teixeira, L. O. (2025). **Addressing Class Imbalance in Rice Disease Diagnosis with Contrastive Dissimilarity.** *Under review.*
- 2 Pignelli, F., Teixeira, L. O., Bertolini, D., Nanni, L., Cavalcanti, G. D. C., & Costa, Y. M. G. (2025). **Contrastive Dissimilarity for Writer Identification:** a proof of concept. *32nd International Conference on Systems, Signals and Image Processing (IWSSIP).*  <https://doi.org/10.1109/IWSSIP66997.2025.11151867>
- 3 Pereira, L. F. M., Pignelli, F., et al. (2021). **Japanese Kana and Brazilian Portuguese Manuscript Database.** *25th Iberoamerican Congress on Pattern Recognition (CIARP).*  [https://doi.org/10.1007/978-3-030-93420-0\\_17](https://doi.org/10.1007/978-3-030-93420-0_17)
- 4 Pignelli, F., Bertolini, D., Britto, A. S., Costa, Y. M., & Oliveira, L. (2021). **Document Filter for Writer Identification.** *28th International Conference on Systems, Signals and Image Processing (IWSSIP).*  [https://doi.org/10.1007/978-3-030-96878-6\\_16](https://doi.org/10.1007/978-3-030-96878-6_16)
- 5 Pignelli, F., Costa, Y. M., Oliveira, L. S., & Bertolini, D. (2021). **Data Augmentation for Writer Identification Using a Cognitive Inspired Model.** *16th International Conference on Document Analysis and Recognition (ICDAR).*  [https://doi.org/10.1007/978-3-030-86337-1\\_17](https://doi.org/10.1007/978-3-030-86337-1_17)
- 6 Santana, I. A. P., Pignelli, F., et al. (2020). **Music4All:** A New Music Database and Its Applications. *27th International Conference on Systems, Signals and Image Processing (IWSSIP).*  <https://doi.org/10.1109/IWSSIP48289.2020.9145170>

## Prizes and Awards

- 2025 | 26     **D.Sc. Student Mobility Grant (72,680.53R\$)**, Araucária Foundation, to visit Università degli Studi di Padova (UNIPD)
- 2018 | 19 | 20     **M.Sc. Student (42,000R\$ - 1,500R\$/month)**, CAPES
- 2017     **Hackathon-winning Team**, NASA Space Apps Challenge
- 2015 | 16 | 17     **Outstanding Student Award**, Ingá University

## Teaching

- UEM<sup>1</sup>     Applied Informatics, Human-Computer Interaction, Object-Oriented Programming, Programming Fundamentals
- UniCV<sup>2</sup>     Computer Architecture, Graph Theory, Theory of Computation

## Students

- 2024 – 25     **João Vitor Miguel** – Cidade Verde University (UniCV)  
Type: B.Sc. Student  
Title: Implementing Accessible Features in a 3D Graphic Engine
- Isadora Gobira Benner**, with Prof. Erick Gagliardi – Cidade Verde University (UniCV)  
Type: B.Sc. Student  
Title: Technological Innovations and Their Impacts: An Analysis of Current Trends

## Tools

- Programming Languages     Python, JavaScript, C#, Matlab
- Operating Systems     MacOS and Linux (Ubuntu | Mint) and Windows 10 | 11
- Databases     SQLite, MySQL, Progress OpenEdge
- ML Techniques     Statistical Models (SVM, K-NN, K-Means, Naïve Bayes), Deep Learning (CNN, MLP)
- ML libraries     Scikit-learn, Keras, PyTorch, TensorFlow, OpenCV

## Languages

- Portuguese     Native
- English     Professional proficiency
- Spanish     Strong reading and comprehension
- Italian     Basic
- French     Basic

<sup>1</sup>State University of Maringá

<sup>2</sup>Cidade Verde University