

Beatriz Pedrosa Cepa

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📍 Esposende, Braga, Portugal



Affiliation

- Apr 2023 – Present ♦ **Research Assistant**, High-Assurance Software Laboratory, INESC TEC.
Out 2021 – Out 2022 ♦ **M.Sc. Student**, High-Assurance Software Laboratory, INESC TEC.

Education

- Apr 2023 – Present ♦ **Ph.D. in Informatics**, University of Minho.
Sep 2017 – Oct 2022 ♦ **M.Sc. in Biomedical Engineering**, University of Minho.
Specialization: Medical Informatics.
Dissertation title: *Deep Learning for Image Generation*.
Sep 2011 – Aug 2017 ♦ **English Course**, The Kids' Club.
B2 Certification.

Publications

Journal Articles

- 1 A. Oliveira, **B. Cepa**, C. Brito, and A. Sousa, "Mac: An artifact correction framework for brain mri based on deep neural networks," *bioRxiv*, 2024. 🔗 DOI: 10.1101/2024.08.02.606374. eprint: <https://www.biorxiv.org/content/early/2024/08/06/2024.08.02.606374.full.pdf>.

Conference Proceedings

- 1 **B. Cepa**, C. Brito, and A. Sousa, "Generative adversarial networks in healthcare: A case study on mri image generation," in *2023 IEEE 7th Portuguese Meeting on Bioengineering (ENBENG)*, 2023, pp. 48–51. 🔗 DOI: 10.1109/ENBENG58165.2023.10175330.

Experiences

M.Sc. Dissertation Supervision

- Sep 2023 – Present ♦ **Correction of Motion Artifacts in Brain MRI scans using Deep Learning in High-Performance Computing**, INESC TEC and University of Minho.
Co-supervisor of Alícia Oliveira.
Co-advised with Cláudia Brito and António Sousa.
Sep 2022 – Present ♦ **Benchmarking Distributed Machine Learning Frameworks for Healthcare Use Cases**, INESC TEC and University of Minho.
Co-supervisor of Luís Branco.
Co-advised with Cláudia Brito and António Sousa.

Talks

- April 2024 ♦ **Workshop Speaker at WEEKSHOP**, University of Minho, Portugal.
Workshop entitled *Latex + Mendeley*.

Experiences (continued)

- February 2024 ◇ **Workshop Speaker at the XIX Biomedical Engineering Summit**, University of Minho, Portugal.
Workshop entitled *Medical Imaging Informatics: A Whole New World*.
- June 2023 ◇ **Poster Presentation at the 7th IEEE Portuguese Meeting on Bioengineering (ENBENG 2023)**, Porto, Portugal.
Paper entitled *Generative Adversarial Networks in Healthcare: A case study on MRI Image Generation*.

Certification

- Apr 2016 ◇ **Certified Level B2 in English**. Awarded by University of Cambridge.

Committee Member

- Mar 2024 – Present ◇ **Student Representative on the School of Engineering Board**, University of Minho.
- May 2023 – Present ◇ **Student Representative on the Course Committee of the Doctoral Program in Informatics**, University of Minho.

Association Member

- Oct 2020 – Apr 2021 ◇ **Vice-Director of the Recreational Department**, Gabinete de Alunos de Engenharia Biomédica (GAEB), University of Minho.

Event Organization

- ◇ **XVI Biomedical Engineering Summit**, University of Minho.
Member of the Organizing Committee.
Event dates: 18/02/2021 – 20/02/2021.

Tutoring

- Sep 2016 – Aug 2017 ◇ **Peer Tutoring**, Escola Secundária c/ 3.º Ciclo Henrique Medina.
Tutor of 7th grade classes.

Achievements

- ◇ **Implemented two GAN architectures** (DCGAN and WGAN-GP) to generate MRI images of the brain in a distributed environment.
- ◇ **Collaborated with the School of Psychology** of the University of Minho to study and predict caregiver burden of patients with Alzheimer's Disease.

Scholarships

- May 2023 – Present ◇ **Research Grant** (10241/BI-M-ED_B2/2023).
Awarded by INESC TEC.
- Mar 2022 – Sep 2022 ◇ **Research Initiation Grant** (9547/BII-E_B4/2022).
Awarded by INESC TEC.

Skills

- Languages ◇ **Portuguese.** Native language.
English. Reading and Listening: C2; Writing: C1; Speaking: B2.
French. Reading and Listening: B1; Writing and Speaking: A1.
- Technical Skills ◇ **Python.** Machine and Deep Learning models.
Medical Imaging Informatics. Image pre-processing, image generation.
Distributed Computation. SLURM.
- Soft Skills ◇ Academic Research, Team Work, Problem Solving, Public Speaking.