Beatriz Pedrosa Cepa

✉ beatriz.cepa@inesctec.pt 　　 in linkedin.com/in/beatriz-cepa

📞 +351 967 722 443 　　 📍 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. |

Events

Sep 2024	◇ **ACM Europe Summer School on HPC Computer Architectures for AI and Dedicated Applications**, Barcelona.
	Participant.
	Event dates: 01/09/2024 – 06/09/2024.

Feb 2021	◇ **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 the caregiver burden of patients with Alzheimer's Disease.

Achievements (continued)

◇ **Certificate of Honor for Outstanding Performance** in the ACM Europe Summer School on HPC Computer Architectures for AI and Dedicated Applications.

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.