

# Eduardo Henrique Pais Pooch

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## Areas of specialisation

Deep Learning, Medical Imaging, Semi-supervised Learning

## Education

12/2021 - now

**PhD** at the Netherlands Cancer Institute - NKI-AVL (Amsterdam) / Maastricht University. *Project title: "Artificial Intelligence for multimodal characterisation of prostate cancer" @ Regina Beets-Tan Group*

03/2019 - 03/2021

**MSc** in Computer Science, Pontifical Catholic University of Rio Grande do Sul - PU-CRS (Brazil). *Dissertation title: "Pathology Localization on Chest Radiographs with Limited Supervision via Semi-Supervised Multiple Instance Learning"*

02/2015 - 01/2019

**BSc** in Biomedical Informatics, Federal University of Health Sciences of Porto Alegre - UFCSPA (Brazil). *Dissertation title: "A Software to Aid Pulmonary Nodule Detection in Chest Radiographs"*

## Publications

- 2024 Cai, L.; Lambregts, D.; Beets, G.; Maas, M.; Pooch, E.; Guérendel, C.; Beets-Tan, R.; Benson, S. An Automated Deep Learning Pipeline for EMVI Classification and Response Prediction of Rectal Cancer using Baseline MRI: A Multi-Centre Study. **npj Precision Oncology**. DOI: [10.1038/s41698-024-00516-x](https://doi.org/10.1038/s41698-024-00516-x)
- 2022 Kolling, C.; More, M.; Gavenski, N.; Pooch, E.; Parraga, O.; Barros, R. C.. Efficient Counterfactual Debiasing for Visual Question Answering. **IEEE/CVF WACV 2022** DOI: [10.1109/WACV51458.2022.00263](https://doi.org/10.1109/WACV51458.2022.00263)
- 2020 Pooch, E.H.P.; Ballester, P.; Barros, R.C.. Can We Trust Deep Learning Based Diagnosis? The Impact of Domain Shift in Chest Radiograph Classification. **MICCAI 2020 TIA Workshop**. DOI: [10.1007/978-3-030-62469-9\\_7](https://doi.org/10.1007/978-3-030-62469-9_7)
- 2020 Pooch, E.H.P.; Ballester, P.; Barros, R.C..Semi-supervised Classification of Chest Radiographs. **MICCAI 2020 MIL3ID Workshop**. DOI: [10.1007/978-3-030-61166-8\\_19](https://doi.org/10.1007/978-3-030-61166-8_19)
- 2020 Salvi, A.; Gavenski, N.; Pooch, E.; Tasoniero, F.; Barros, R. C.. Attention-based 3D

- 2020 Object Reconstruction from a Single Image. **IJCNN 2020 IEEE International Joint Conference on Neural Networks**. DOI: [10.1109/IJCNN48605.2020.9206776](https://doi.org/10.1109/IJCNN48605.2020.9206776)
- 2020 Pooch, E.H.P.; Alva, T.A.P.; Becker C.D.L.. A Deep Learning Approach for Pulmonary Lesion Identification in Chest Radiographs. **BRACIS 2020 Brazilian Conference on Intelligent Systems**. DOI: [10.1007/978-3-030-61377-8\\_14](https://doi.org/10.1007/978-3-030-61377-8_14)
- 2020 Pooch, E.H.P.; Alva, T.A.P.; Becker C.D.L.. A Computational Tool for Automated Detection of Genetic Syndrome Using Facial Images. **BRACIS 2020 Brazilian Conference on Intelligent Systems**. DOI: [10.1007/978-3-030-61377-8\\_25](https://doi.org/10.1007/978-3-030-61377-8_25)
- 2018 Pooch, E.H.P.; Sanchez-Paz, A.; Fermino, M.H.; et al.. AquaSaúde: A mobile application for educational training on prevention of shrimp pathogen-associated diseases. **Aquaculture Research**. DOI: [doi.org/10.1111/are.13697](https://doi.org/10.1111/are.13697)
- 2018 Inocente, A.P.; Pooch, E.H.P.; Cazella S.C.. Help Cateter: An Application for Mobile Device About Central Venous Catheters Handling. **ISAmI 2018 International Symposium on Ambient Intelligence**. DOI: [10.1007/978-3-030-01746-0\\_6](https://doi.org/10.1007/978-3-030-01746-0_6)

## Internships

- 08/2019 - 02/2021 **AI Research intern** at Hewlett-Packard Brazil/LIS-PUCRS (Brazil).
- 03/2019 - 07/2019 **AI Research intern** at Motorola Mobility/PUCRS (Brazil).
- 04/2018 - 12/2018 **React development intern** at UNA-SUS (Brazil).
- 08/2015 - 07/2017 **Android development intern** at UFCSPA (Brazil).

## Honors & Awards

- 2019 **Google Research Awards for Latin America**– MSc Scholarship for the project “Improving Pathology Localization on Chest Radiographs with Limited Supervision via Semi-Supervised Multiple-Instance Learning”