

PhD Candidate full name:

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Dissertation Title: Weakly Supervised Multimodal Explanations for Medical Image Classification

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Higher Education Institution: University of Porto

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Abstract or Public Summary: This thesis addresses the limited interpretability of deep learning models in medical image analysis by moving beyond traditional post-hoc visual explanations toward more faithful and adaptable approaches. It proposes weakly supervised methods that reduce annotation burden while enabling multiple explanation modalities, including visual, concept-based, and natural language explanations tailored to different users. The results demonstrate that combining weak supervision with multimodal frameworks can produce accurate, interpretable, and clinically relevant explanations without costly annotation pipelines.

Principal Supervisor at INESC TEC: Luís F. Teixeira

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Scientific Domain: [Artificial Intelligence]; [Computer Science and Engineering]

Keywords: Explainable Artificial Intelligence; Multimodal Explanations; Weakly Supervised Learning; Large Vision-Language Models; Medical Image Classification

Public Announcement

Link: https://sigarra.up.pt/fcup/pt/noticias_geral.ver_noticia?p_nr=137161