CS PhD Seminar Series

Apr 28th | 14:30-15:00 | Room 214

Deep Learning Approaches to Support Diagnosis in the Veterinary Domain

This seminar presents the main contributions of my PhD research on deep learning methods to support diagnosis in the veterinary domain. The work is motivated by a central challenge in veterinary medical imaging: although many clinically relevant assessments rely on anatomical landmark localisation, the field still suffers from limited annotated data, few public benchmarks, and a smaller methodological literature than human medical imaging.
To address this gap, the PhD follows a coherent research pipeline in which methods are first developed and validated on human medical images, and then translated to veterinary applications. The seminar will focus on anatomical landmark detection as a core task underlying measurements such as cardiac size and hip geometry. It will present both supervised and self-supervised approaches designed for low-data settings. Particular emphasis will be given to diffusion-based representation learning, together with its translation to veterinary use cases, including automated feline cardiac assessment and future canine orthopedic screening.

Speaker: **Roberto Di Via**

Roberto Di Via is a Ph.D. student in Computer Science at the University of Genova. He received his B.S. degree in Computer Science from the University of Genova in 2021 and his M.S. in Data Science - Artificial Intelligence at the University of Genova in 2023. His research focuses on the analysis of medical images through computer vision and machine learning approaches. Currently working at MaLGa under the supervision of Prof. Francesca Odone and Prof. Vito Paolo Pastore.