

Eugênio Neto

Last year PhD student in Computer Science, specializing in Deep Learning for Computer Vision at the University of Montpellier. Holds a Master in computer science and a Bachelor in computer engineering.


My core research mainly involves Multi-Object Detection, Tracking, Re-Identification, and Segmentation.


Additionally, I am deeply interested by domains like Multi-Task Learning, Fine-Grained Classification, Domain adaptation, Parameter-Efficient Fine-Tuning techniques, and Deep architectures for Vision.

Aspiring to a career as a researcher to develop cutting-edge technologies in Computer Vision and Deep Learning with a positive impact on society.


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Portuguese	English	French	Spanish
Native	Fluent	Fluent	Conversational

PROFESSIONAL EXPERIENCES

PhD student in Computer Science specialized in Deep Learning applied to Computer Vision

Doctoral school I2S - University of Montpellier / January 2024 - December 2026 / France

Integrated in the ICAR (Image & Interaction) team of the LIRMM (Laboratory of Computer Science of Montpellier)

PhD thesis: “**AI-Based Detection and Tracking of Individual Interactions Between Animals from Camera Traps**”.

- Recruited in the context of the [SEAdogSEA project](#), that studies dog-human interactions for epidemiological control and wildlife conservation through camera-trap data collection across Southeast Asia.
- Designed and implemented an end-to-end deep learning pipeline featuring detection, tracking, feature extraction, and clustering for dog Re-ID from camera-trap images.
- Primary contributions focus on novel deep learning methods for individual animal re-identification (Re-ID), with an emphasis on robust feature extraction under challenging conditions such as cross-camera and long-term settings.
- Proposed a dog Re-ID method along with two dedicated datasets, published in Ecological Informatics [3].
- Introduced an animal Re-ID method, presented at IEEE/CVF Winter Conference on Applications of Computer Vision (WACV 2026) [2].
- Preparing a manuscript presenting a novel dataset and benchmark for long-term dog Re-ID [1].

Data Scientist intern

BCA Expertise / March - October 2023 / France (Remote)

Integrated in the data science team of BCA Expertise, France's biggest company in the automotive expertise sector.

- Developed a semi-supervised document classification pipeline achieving over 85% accuracy.
- Implemented Donut as multimodal transformer architecture combining text and image inputs.
- Built semi-automatic data cleaning and labeling workflow, significantly accelerating the processing of thousands of samples.
- Developed a vehicle mileage reading system from images using YOLO for detection and EasyOCR for text recognition.

Team Member of Academic Project

ATOS / September 2022 - February 2023 / France

Integrated into an academic project group at Atos, a global IT services company.

- Collaboration on the development of a deep-learning pipeline for classifying fish species in underwater images.
- Applied BiT for Fine-Grained classification, reaching over 80% accuracy.
- Applied oversampling techniques to manage the unbalanced train dataset.

Research Intern in Machine Learning

LIRMM / May - August 2022 / France

Integrated in the ICAR (Image & Interaction) team of the LIRMM (Laboratory of Computer Science of Montpellier)

- Designed and implemented an end-to-end deep learning pipeline featuring detection, tracking, feature extraction, and clustering for dog Re-ID from camera-trap images.
- Demonstrated the feasibility of the research, directly leading to the launch of my doctoral research project.
- Paper published at the GRETSI (Francophone Conference on Signal and Image Processing) 2023 [4].

Java WEB Development Intern

Federal University of Bahia / January - August 2021 / Brazil (Remote)

Integrated in the WEB development team of UFBA. UFBA is in the top-20 best universities in Brazil.

- Collaboration in the development of new features and maintenance of a Java-based web system responsible for managing various administrative features for the Federal University of Bahia.
- Management of the PostgreSQL database.

EDUCATION

PhD in Computer Science specialized in Deep Learning applied to Computer Vision

Doctoral school I2S - University of Montpellier / January 2024 - December 2026 / France

Master in Computer Science

ENSICAEN (School of Engineers of Caen) / August 2021 - August 2023 / France

Focused on advanced concepts of machine learning, deep learning, data mining, image synthesis and image processing. Alongside with fundamental concepts like software engineering, algorithms and mathematics for computer science.

Bachelor in Computer Engineer

UFBA (Federal University of Bahia) / January 2016 - December 2023 / Brazil

Specialized in digital electronics and embedded systems, including FPGA design, microcontrollers, computer architecture and low-level programming (Assembly, Verilog, C).

RESEARCH

[1] **Neto** et al. SEAdogSEA-Indonesia: A long-term dog re-identification dataset and benchmark. *In preparation*, 2026.

- Introducing the largest long-term dog Re-ID dataset, comprising camera-trap images spanning four years of capture in Indonesia. Furthermore, the dataset has the highest metadata variability among existing animal Re-ID datasets.
- We introduce a rigorous new benchmark designed to evaluate model generalization across both diverse scenarios and across temporal changes.

[2] **Neto** et al. An improved architecture for part-based animal re-identification through semantic segmentation distillation. IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) 2026 (submitted and accepted in round 2 - 26% acceptance rate).

- Proposed PAW-ViT (Part-Aware Vision Transformer), a novel animal Re-ID method that guides vision transformer attention through semantic segmentation distillation during training.
- Achieved state-of-the-art performance on two animal Re-ID benchmarks, particularly in challenging cross-camera scenarios.

[3] **Neto** et al. Background-invariant re-identification of dogs from camera-trap videos in non-controlled environments. Ecological Informatics (Impact factor: 7.3, CiteScore: 11.4) 2025.

- Proposed BIFOR (Background Invariant Feature extractOR), a training strategy designed to reduce background influence for generalizable dog Re-ID. Achieves state-of-the-art cross-domain performance.
- Released two datasets to the scientific community that are, to date, the largest dog Re-ID datasets. Hosted in a [custom website](#).

[4] Barrelet, **Neto** et al. Re-identification of dogs from videos in uncontrolled environments, GRETSI (Francophone Conference on Signal and Image Processing) 2023.

- Preliminary study leading to [3], conducted during a four-month M1 internship at LIRMM.
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EXTRACURRICULAR

- Reviewer for the journals **International Journal of Computer Vision** and **Multimedia Tools and Applications**.
 - **Second** out of 42 teams in the [international AI competition for breast cancer segmentation on 3D CT scans](#) organised by the Cancer Institute of Montpellier in 2025.
 - Competitor in machine learning challenges at Kaggle.
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SKILLS

Communication

Supervised four internship students and collaborated with researchers of different countries like Indonesia and Thailand.

Artificial Intelligence

Machine Learning, Deep Learning, Computer Vision, Pytorch, HuggingFace, Scikit-learn.

Programming Languages

Python, Java, Javascript, C, C++.

Database

SQL (MySQL, PostgreSQL), NoSQL (Mongo, Dynamo).

WEB

HTML, CSS, Node, Flask, NextJS.

Data Processing

Numpy, Pandas, OpenCV.

Version Control

GIT (Github, Gitlab).

Cloud

AWS.