Anne Marthe Sophie Ngo bibinbe
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STUDY

PHD in computer vision applied to animal behavior tracking since 2022
Laval University, Quebec / UCF, Florida

Computer science (Data Track) 2021
ISIMA (Clermont Auvergne University), Clermont-Ferrand, France

Computer engineering 2020
Polytechnique Yaounde, Cameroun, Yaounde

SKILLS

Domain: Computer Vision, VLM, LLM
Frameworks: Tensorflow, Pytorch

EXPERIENCES

PhD Student 2022-Present
Laval University, Québec

- **Project1: Long-term identity aware multi-animal tracking** 2022-2024

  Development of the PromptTrack library (https://pypi.org/project/PromptTrack/) for tracking any object based on prompt.

  *Proposal of a long-term tracking Framework based on HMM merging stochastic identity information with classic tracking by detection to solve the long-term tracking problem with a use case on livestock tracking (Accepted at **CVPR 2024** animal workshop and invited to IJCNN)*

- **Project2: Animal behavior analysis** 2024-Present

  Proposed an unsupervised pig aggression detection and entity localization in video by leveraging a Conv3D based autoencoder and tracking

PhD Student (Visitor) 2025
University of Central Florida, Florida

(Ongoing) Proposing a zero-shot STAD model. The purpose is to give a list of action prompts you are interested in and a video to get the tubelets concerned by those actions. Here I am finetuning Internvideo similarly to OWL-VIT ton get the model.

AI consultant Winter 2024-Present

Machinex, Québec

- Developing models for factory sorting robots
- Developed test time adaptation models to improve performances of models on new client factories
- Developing a model to estimate weight based on 2D images

AI researcher, Anomaly detection on streaming data 2021-2022

CNRS/Pfeiffer-Vacuum, Clermont-Ferrand, France

- State of the art and Benchmark of anomaly detection methods in data streams and time series.
- Design and development of an explainable anomaly detection model for a real-time air contamination monitor.
- Proposed a method for detecting abnormal subsequences in data streams (Drag-stream, accepted at the ICDM 2022 conference).

Junior Machine learning engineer Winter 2021

Omdena, Californie, USA

- Development of a recommendation system to advise users on activities to reduce their biological age.

SCIENTIFIC PUBLICATION

CV4animals: CVPR 2024 2024

An HMM-based framework for identity-aware long-term MOT from sparse and uncertain identification: use case on long-term tracking in livestock.
Anne Marthe Sophie Ngo Bibinbe, Patrick Gagnon, Jamie Ahloy-Dallaire, Eric R. Paquet

ICDMW 2022 2022

DragStream: An Anomaly and Concept Drift Detector In Univariate Data Streams,
Sophie Ngo Bibinbe, Abdoul Mahamadou, Michael Mbouopda, Engelbert Mephu Nguifo

IJCNN IEEE 2022 2022

A survey on unsupervised learning algorithms for detecting abnormal points in streaming data,
Sophie NGO BIBINBE, Michael MBOUOPDA, Raissa MBIADEU SALEU, Engelbert MEPHU

Short article: EGC 2022 2021

Benchmarking unsupervised methods for abnormal point detection in data stream,
Sophie NGO BIBINBE, Michael MBOUOPDA, Raissa MBIADEU SALEU, Engelbert MEPHU

OPENSOURCES CONTRIBUTIONS

Pypi 2023

Development of the PromptTrack library (https://pypi.org/project/PromptTrack/)

DISTINCTIONS

Won the CDPQ AGA project presentation competition 2024
750 $

Labex scholarship IMOBS3 2020
5 735 $

- Academic Support Excellence Scholarship for ISIMA Training

Laureate of the Machine learning programming competition (MLPC) 2020
300 $

- 4th price project of the MLPC

Finalist of the Huawei seeds for the future competition 2019

Best female volleyball player of the Cameroun university games 2016-2017 2017

- Trophy of the best female volleyball player