Jonas Ngnawe

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EDUCATION

PhD in Computer Science   Fall 2021 - (Ongoing)

Mila and Intelligence and Data Institute (IID), Laval University, Quebec

Adversarial Robustness, Distribution Shifts and Uncertainty in Deep Learning Models

Recent publications:
- Detecting Brittle Decisions for Free: Leveraging Margin Consistency in Deep Robust Classifiers, NeurIPS 2024
- A Layer Selection Approach to Test Time Adaptation, AAAI 2025

Check out my work at Jonas Ngnawé - Google Scholar

Master in Machine Learning   2018 - 2019

AIMS African Master's of Machine Intelligence, Kigali, Rwanda

Taught by international experts, a Master's program funded by Facebook and Google,

Link Complete list of courses (Fundamentals, Vision, NLP etc.)

Project: Scalable Inference with Distributed Gaussian Processes using the Wasserstein Barycenter.

Master in Mathematical Sciences   2016 - 2017

African Institute for Mathematical Sciences, Limbe, Cameroon

Project: k-Clustering Problem-Application to a Field Technician Allocation Optimization Problem.

Engineering's Degree in Computer Science   2011 - 2016

Ecole Polytechnique Yaoundé, Cameroon

Other: Machine Learning Summer School (MLSS), London 2019

AI/ML EXPERIENCE

Google AI resident   Oct 2019 - Sep 2021

Google Brain Team Accra, Ghana
- Development of robust methods for deep neural networks
- Compression of deep neural networks by quantization and pruning

Tools, Languages and Methods: Python/Tensorflow 2.0, Google Cloud Platform (GCP)

Publication: Robustmix: Improving Robustness by Regularizing the Frequency Bias of Deep Networks.

Accepted at NeurIPS 2022 Workshop on Distribution Shifts: Connecting Methods and Applications.

AI/ML SKILLS

ML Frameworks	Pytorch, Tensorflow, Scikit-Learn
MLOps Tools	Git/Github, Weight&Biases, Docker, Ray, Slurm

Other	Distributed Training, Supervised Fine-tuning, Adversarial Evaluation of VLMs (eg: mini-GPT4, LLaVa, BLIP-2)

OTHER EXPERIENCE

Software Developer Engineer Internship   Feb - August 2016
Bolloré Africa Logistics, Port of Douala, Cameroon
- Automation and Analysis of the Review of Access Rights to the Information System
- Detection of abnormal access rights

Tools, Languages and Methods: Talend Open Studio, Qlikview, C#, ASP.Net, Microsoft SQL Server, Visual Studio, UML/Merise, BPMN 2.0, PMI Methodology

Computer engineer   Jan - Aug 2018
GroupOne Holding Company, Limbe, Cameroun
- Website development
- Fuel consumption prediction projects
- Studies for the creation of a startup incubator (Business plan)
- Industrial Maintenance (Refinery) of the Honeywell Experion System
- IT Support

Tools, Languages and Methods: HTML5/CSS3/JavaScript/JQuery/JQueryUI/Ajax/PHP, MySQL, Méthodologie PMI, Business Model Canvas

Freelance Software Developer   2017-2018
- Digitization of administrative procedures for various ministries in Cameroon,
- Development and maintenance of WordPress plugins (WooCommerce)

Tools, Languages and Methods: Electronic Document Management (EDM)/Electronic Archiving (MARCH RM), PHP/Woocommerce, MySQL Workbench, Microsoft Access, Git/Gitlab/Github, Java, Netbeans, SCRUM

ACTIVITIES

Panelist at the Black In AI Workshop at Neurips 2024: *"AI Regulation & Fairness in the Generative AI Era."*

Host at KmerAI Talks

Keynote speaker at Deep Learning IndabaX-Cameroon: Robustness in AI.
Dec. 27, 2022

Organizing committee member of Interpolate workshop @Neurips2022: First Workshop on Interpolation Regularizers and Beyond.

Founding member of Kmer-AI, an association for the promotion and vulgarization of AI and Machine Learning in Cameroon.
Since 2020

Co-organizer of a Machine Learning Projects Competition (MLPC)
2020, 2021, 2022
Polytechnique Yaoundé

Co-organizer of a two (02) week introductory course in Machine Learning
September 2019
Polytechnique Yaoundé

Co-organizer of the first Deep Learning IndabaX Rwanda, a conference on Machine Learning and AI
April 2019, Kigali, Rwanda

Reviewer: [Algorithmic Fairness through the Lens of Causality and Robustness](#), [Algorithmic Fairness through the Lens of Causality and Privacy](#), [Algorithmic Fairness through the Lens of Time](#), [Algorithmic Fairness through the Lens of Metrics and Evaluation](#), [Montreal AI Symposium](#), [Black in AI Workshop @NeurIPS](#), [Deep Learning Indaba](#)