

Jonas Ngnawé

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EDUCATION

PhD in Computer Science Fall 2021 - (Ongoing)

[Mila](#) and [Intelligence and Data Institute \(IID\)](#), Laval University, Quebec, Canada

MSc. 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](#) (ML Fundamentals, Computer Vision, NLP, etc.)

MSc. in Mathematical Sciences 2016 - 2017

[African Institute for Mathematical Sciences](#), Limbe, Cameroon

Msc. in Computer Engineering 2011 - 2016

Ecole Polytechnique Yaoundé, Cameroon

Other: [Machine Learning Summer School \(MLSS\)](#), London 2019

PUBLICATIONS

1. [A Layer Selection Approach to Test Time Adaptation](#), Sahoo, S., ElAraby, M., **Ngnawe, J.**, Pequignot, Y., Precioso, F., & Gagné, C. (**AAAI 2025**).
2. [Detecting Brittle Decisions for Free: Leveraging Margin Consistency in Deep Robust Classifiers](#), **Ngnawé, J.**, Sahoo, S., Pequignot, Y., Precioso, F., & Gagné, C. (**NeurIPS 2024**).
3. [Robustmix: Improving Robustness by Regularizing the Frequency Bias of Deep Networks](#). **Ngnawe, J.**, Njifon, M. A., Heek, J., & Dauphin, Y. (**NeurIPS 2022 Workshop on Distribution Shifts**).
4. [Scalable Inference with Distributed Gaussian Processes using the Wasserstein Barycenter](#). **Ngnawé, J.**, Deisenroth, M. (Master's project)
5. [k-Clustering Problem-Application to a Field Technician Allocation Optimization Problem](#). **Ngnawé, J.**, Zacko, E., Wandji, N., Ndjinga, M. (Master's project)

AI/ML EXPERIENCE

Google AI resident Google Brain Team Accra, Ghana Oct 2019 - Sep 2021

- Development of robust methods for deep neural networks
- Compression of deep neural networks by quantization and pruning

AI/ML SKILLS

ML Frameworks Pytorch, Tensorflow, Scikit-Learn

MLOps Tools Git/Github, Weight&Biases, Docker, Ray, Slurm, Google Cloud Platform

Other Distributed Training, Supervised Fine-tuning, VLMs/LLMs Adversarial Evaluation

OTHER EXPERIENCE

Software Developer, Bolloré Africa Logistics, Port of Douala, Cameroon Feb - Aug 2016

- 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, GroupOne Holding Company, Limbe, Cameroon

Jan - Aug 2018

- 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

Talks

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

"Detecting Brittle Decisions for Free" [Kmer AI June 2024](#), [Galsen AI January 2025](#)

Keynote speaker, *"Robustness in AI"* [Deep Learning IndabaX-Cameroon](#) Dec. 27, 2022

Host at [Kmer AI Talks](#)

Reviews

IEEE Transactions on Image Processing

[Algorithmic Fairness through the Lens of Causality and Robustness](#) @NeurIPS 2021

[Algorithmic Fairness through the Lens of Causality and Privacy](#) @NeurIPS 2022

[Algorithmic Fairness through the Lens of Time](#) @NeurIPS 2023

[Algorithmic Fairness through the Lens of Metrics and Evaluation](#) @NeurIPS 2024

[Montreal AI Symposium](#) 2022, 2024

[Black in AI Workshop](#) @NeurIPS 2022, 2023, 2024

[Deep Learning Indaba](#), Pan-African Machine Learning Conference, 2023

Leadership and Event Organization

Organizing committee of [Interpolate workshop @Neurips2022](#): First Workshop on Interpolation Regularizers and Beyond.

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, Machine Learning and AI conference April 2019, Kigali, Rwanda

Co-Founder Kmer-AI, an association for promoting and vulgarizing AI and Machine Learning in Cameroon. Since 2020