



Abdoulaye Diop

Ph.D.

My Contact

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🌐 <https://abdoulaye-diop.com>

Skills

- **Machine learning frameworks:** TensorFlow, Scikit-learn, PyTorch, Pandas, Feast, Huggingface models, Transformers, LangChain, RAG
- **Data analytics and management:** ElasticSearch, PostgreSQL, Spark
- **High performance computing:** MPI, OpenMP
- **Programming :** Python , C/C++, YAML, SQL
- **Cloud computing:** GCP, CI/CD, Argocd, Kubernetes, Kubeflow, Kafka, Docker

Languages

- French: Native
- English: Fluent
- Wolof: Native
- Spanish: Basics

Education Background

- **Unviersity of Paris Saclay**, France
Ph.D. of Computer Science: Machine learning & Cybersecurity
Completed in 2021
- **University of Paris Saclay**, France
M.Sc. of High Performance Computing and Simulation
Completed in 2016
- **University of Lille**, France
M.Sc. of Automation and Industrial Computing
Completed in 2014

Certifications

Generative AI with Large Language Models(DeepLearning.AI, AWS), Introduction to responsible AI(Google Cloud Skills), IBM Professional **Data Science** Specialization.

About Me

As an AI Researcher with a solid foundation in Machine Learning, High Performance Computing, and Cybersecurity, I bring over 5 years of hands-on experience complemented by a Ph.D. in the field. I am deeply passionate about pushing the boundaries of what's possible and translating cutting-edge research into practical, industrialized applications. I am currently seeking a challenging role that will allow me to contribute at the forefront of AI innovation, conduct impactful research, and work alongside a dynamic team to tackle complex challenges.

Professional Experience

Atos-Evidian | ML Engineer – AI Researcher 2018 – Present, Paris, France

- Developed and deployed machine learning models based on ensemble learning methods for detecting intrusions and deviant behaviors, significantly enhancing cybersecurity software precision.
- Proposed a high-performance computing GPU-based hardware architecture on cloud servers for the training, inference, and industrial deployment of large language models (LLMs). Focused on augmenting these models with Retrieval-Augmented Generation (RAG), AI agents, and fine-tuned techniques, this development optimizes scalability and facilitates the integration of advanced AI technologies into cybersecurity processes.

Atos-BULL | Developer Intern April – September 2016, Paris, France

Conducted modeling and performance analysis of an ARM-64 bit HPC cluster on the gem5 simulator, leveraging a virtual Ethernet network as the interconnection between nodes, and optimize the system architecture. Investigated energy consumption using MCPAT to enhanced the efficiency and sustainability the systems.

Scilab | Developer Intern May – August 2015, Versailles, France

Developed open-source Scilab industrial modules; contributed to Scilab version 6, enhancing functionality.

Kuka | Developer Intern May – August 2014, Montigny-Le-Bretonneux, France

Developed a project management application for Renault SAS, monitoring automation and robotics in car manufacturing plants

Articles & Communications

FR/JP/GE 2019 Workshop Poster: A Parallel and Scalable Framework for Insider Threat Detection, (Tokyo, Japan)

ICISS 2019 Article: Design of an Ensemble Learning Behavior Anomaly Detection Framework, (Paris, France)

IPCCC 2020 Article: A Unite and Conquer Based Ensemble learning Method for User Behavior Modeling, (Austin Texas, United States)

HIPC 2020 Article: A Parallel and Scalable Framework for Insider Threat Detection, (Bangalore, India)