

PERSONAL INFORMATION

Fenosoa Randrianjatovo

📍 Chicoutimi, Québec, Canada

✉ fenosoa.randrianjatovo@inrs.ca

🌐 [Fenosoa Randrianjatovo](#)

🐙 <https://github.com/FenosoaRandrianjatovo>

EXPERIENCE

Sep 2023 – Sep 2024

Data Scientist at ReeferPulse, Aix-en-Provence, France

Remote Data Scientist at [ReeferPulse](#). We focused on the application of Artificial Intelligence for the reduction of Greenhouse Gas (GHG) emissions.

Keywords: Python, TensorFlow, Keras, AWS, NoSQL, SQL, Object Segmentation, Time Series Analysis, [GLEC Framework](#) and ISO 14083:2023 GHG.

- Finding the shortest feasible distance to reduce GHG emissions in freight transportation.
- Implementing an ISO standard protocol into an existing data processing solution.
- Implementing a multi-class segmentation and polygonization process applied to satellite images.
- Analyze the results of GHG emissions and improve accuracy.

Jan 2023 – Aug 2023

Researcher at Max Planck Institute for Intelligent Systems, Germany

Research internship in transfer learning in recurrent Reinforcement Learning problems.

Keywords: Transfer learning, sequential decision making, Reinforcement Learning, meta learning and Bandit Algorithms.

- Research funded by Cluster of Excellence - Machine Learning for Science.
- Design and develop new recurrent reinforcement learning algorithms.
- Analyze experimental results, identify patterns and draw meaningful conclusions.

Dec 2020 – Jan 2022

Data Scientist at Martin Pêcheur, Madagascar

Data Scientist.

Technologies: SQL Server, SQL, Python, Numpy, Keras, Scikit-learn, TensorFlow, PyTorch, R.

- Identify business challenges
- Design and optimize data pipelines
- Design and conduct experiments
- Provide data-driven insights
- Develop data-driven solutions
- Develop and implement predictive models
- Present complex results
- Collect and clean large datasets .

June 2020 – Dec 2020

Mathematics Teaching Assistant at AIMS, Rwanda

The African Institute for Mathematical Sciences , AIMS Rwanda

- Support the lecturers
- Conduct the tutorials
- Mark the assignments/quizzes
- Provide a feedback on those assignments
- Assist with academic quality assurance
- Assist with library maintenance
- Assist the IT Manager
- Complete administrative tasks.

EDUCATION

- Sep 2024 – present **Master's degree in Biotechnology at INRS-AFSB, Canada**
This program from the Institut national de la recherche scientifique (INRS) offers advanced training in bioinformatic and biotechnology, fostering innovative research and interdisciplinarity. Fully funded by **INRS-AFSB**.
- Mars 2024 – Apr 2024 **Certificate in Data Science, AIMS-RIC Rwanda**
Research and Innovation Center (**AIMS-RIC**) is a center of research in Foundational methods for Data Science.
Fully-Funded Scholarship from **Carnegie Corporation of New York**.
- Jan 2022 – Jan 2023 **Master's degree in Machine Intelligence, AMMI Senegal**
The African Master's of Machine Intelligence (**AMMI**) is an intensive research graduate program in Artificial Intelligence and its applications.
Fully-Funded Scholarship sponsored by **Google** and **Meta**.
- July 2020 – Dec 2020 **Certificate in Management and Technology, ESMT Berlin**
The European School of Management and Technology (**ESMT**) , Berlin.
Full Scholarship in partnership with **DAAD** and **AIMS South Africa**.
6-month intensive training covering all of the major fields in Business technology and Management.
- Aug 2019 – June 2020 **Master's degree in Mathematical Sciences, AIMS Rwanda**
The African Institute for Mathematical Sciences (**AIMS**) in Rwanda
Msc with *speciality in Operator Theory and Quantum Computing*
Full Scholarship awarded by **Next Einstein Initiative** and **MasterCard Foundation**.
- Apr 2018 – July 2019 **Master in Fundamental Mathematics, Antananarivo Madagascar**
University of Antananarivo, Madagascar
Speciality: Probability and Analysis.
- July 2014 – May 2018 **Bachelor's degree in Mathematics and Computer Science**
University of Antananarivo, Madagascar
Speciality: Analysis and Numerical Method

PROJECTS

- Jan 2024 – Apr 2024 **Deep Learning for Malaria Diagnosis (Deep Computer Vision)**
AIMS Research and Innovation Center in Kigali
Technologies: Python, Numpy, Keras, Scikit-learn, TensorFlow, PyTorch, Pre-trained model.
- Classification of infectious disease using Deep Computer Vision.
 - Data augmentation using Generative Adversarial Network and Diffusion Model.
 - Train the model using the new available dataset.
 - Hyper-parameters tuning (Fine-Tuning) for VGG16, UNet and AlexNet.

Sep 2021 – Oct 2021

Paddy Disease Classification Project (Deep Computer Vision)

The African Masters of Machine Intelligence (AMMI) in Senegal

Technologies: Python, Numpy, Scikit-learn, TensorFlow, PyTorch, Pre-trained model.

- Classification of rice plant diseases using Deep Computer vision
- Hyper-parameters tuning (Fine-Tuning) for ResNet, AlexNet and DenseNet
- Train the model using the new available dataset
- Test the final model on a separate test set to assess its generalization and performance

Apr 2021 – June 2021

Covid-19 DNA Sequence Classification (NLP)

The African Masters of Machine Intelligence (AMMI) in Senegal

Technologies: Python, Optuna, Cvxopt, Pandas and Numpy.

- The aim of this project is to implement Kernel-based methods capable of solving the classification problem.
- Predicting whether a DNA sequence belongs to SARS-CoV-2 (Covid-19).

ADDITIONAL TRAINING

10 Mars 2024 – 8 April 2024

Foundational Methods in Data science, Kigali Rwanda

PhD Training School

- Machine Learning Essentials
- Large Language Models
- Statistics and Scientific Method
- Research presentations
- Fundamentals in Reinforcement Learning
- Data science: Exploring Frontiers and Beyond
- Problem Solving in Data Science
- Generative Modelling
- Random Effect Models
- Science for Social Good
- Data-Driven Optimization
- Real-World Data science Projects

Sep 2023 – Jan 2024

MLops (Machine Learning Operations)

ZoomCamp, Online platform.

- Introduction to MLops
- Continuous Integration for ML
- Orchestration and Workflow Management
- Scalability and High Availability
- Model Governance and Compliance
- Infrastructure as Code (IaC)
- Version Control for ML
- Continuous Deployment for ML
- Model Performance Optimization
- Designing ML systems for scalability
- Containerization
- Case Studies and Real-World Projects

VOLUNTEERING

March 2021 – July 2021

Young Men's Christian Association (YMCA) Madagascar

YMCA is a worldwide youth organization based in Geneva, Switzerland

- We offer food and water for vulnerable young people in South of Madagascar
- We offer a free training (Life Skills) for young children.

Feb 2020

Outreach Training Program

Eastern province of Rwanda

- Train the high school students to be effective in sciences
- Motivation speech and interaction with other teachers especially in the Village

PERSONAL SKILLS

Programming skills	Python, PyTorch, TensorFlow, Docker, Keras, Scikit-learn, NLTK, SpaCy, Gensim, Numpy, Matplotlib, Scanpy, Seurat, SpatialGlue, Msprime, Genlib, HPC, AWS, SQL, NoSQL, Matlab, R, C, C++, PHP, HTML, CSS and JavaScript.
Computer skills	$\LaTeX$, LibreOffice, Microsoft 365, Azure, Power BI, Tableau, Linux, Windows.
Languages	English, French, Malagasy.

REFERENCES

- Academic Director at the African Institute for Mathematical Sciences (AIMS) in Kigali, Rwanda.
 - * **Prof. Blaise Tchapnda**
 - * blaise.tchapnda@aims.ac.rw
- Head of School at the Maxwell Institute for Mathematical Sciences at the University of Edinburgh, United Kingdom.
 - * **Prof. Bernd Schroers**
 - * B.Schroers@ed.ac.uk