Jean Lucien Randrianantenaina

Mathematicians, Machine Learning

🕋 7 Papegaai, Stellenbosch, South Africa

rjlucienaina@gmail.com fahazavana.github.io

J +27 625 924 553

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Fahazavana

Summary

I am an enthusiastic problem-solver with a deep passion for mathematics and computer science. I enjoy learning and tackling challenges that require me to apply my interpersonal skills and technical skill, as well as those that provide opportunities for personal growth. Moreover, I am always ready to face any challenges.

Educations

MSc. in Machine Learning and Artificial Intelligence
Stellenbosch University, South Africa

Jan. 2024 - Nov. 2024

Msc. in Mathematical Sciences – Fundamental Sciences

Sep. 2022 - Jun. 2023

African Institute for Mathematical Science, Limbé Cameroon CGPA: 3.52/4

■ MSc. in Mathematics and Applications - Fundamental Mathematics

Jun. 2019 - Jan. 2024

Nov. 2015 - Apr. 2019

Faculty of Science, University of Fianarantsoa, Madagascar

Overall average: 14.25/20

Bsc. in Mathematics and Application – Fundamental Mathematics

Faculty of Science, University of Fianarantsoa, Madagascar

Overall average: 14.83/20

Baccalaureate in Technology in Industrial Engineering

Sep. 2012 - Jul. 2015

Technical High School Beravina Fianarantsoa, Madagascar

Overall average: 13.08/20

Publication and Talks

Florian Luca and Jean Lucien Randrianantenaina, "There Is No Carmichael Number of the Form $2^n p^2 + 1$ with p prime", INTEGER, Volume 23 (2023) \mathfrak{G} .

Talk at AIMS Cameroon, 2023: "Fermat last theorem, with n=4" Presented to AIMS Cameroon students. Supervised by Prof. Dr Hans Georg Rück, Universität Kassel.

Research Experiences

Recomender System on the 25M and 100k MovieLens dataset (Report)

2024

Building a movie recommender system using Matrix Factorization with Python/Numpy/Scipy. Exploration of algorithms like ALS, SGD, BPR.

🗸 Optimizing U-net architecture for brain tumour segmentation, using Genetic Algorithm (Msc. Thesis)

2023

Proposing the usage of genetic algorithm to optimize the hyperparameters of the U-net architecture.

Supervisor: Dr Aurelle Tchagna Kuanou (U. of Buea Cameroon) and Dr Joelson Randriamparany (U. Fianarantsoa)

Carmichael Number (Msc. Thesis)

2023

Exploring the concept of Carmichael Numbers and proving the non-existence of a Carmichael Number of the forms $2^n p + 1$, with p prime.

Supervisor: Prof. Florian Luca (U. of Wits, South Africa)

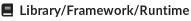
Radical resolution of a polynomial Equation (BSc. Project)

2019

Exporation of radical resolution method and explaining why there is no general formula to solve a polynomial equation of degree higher than five.

Supervisor: Prof. Solo Randriamahaleo (U. of Fianarantsoa)

Python R SageMath JavaScript MySql HTML CSS ETEX





A■ Language

English					
French					
Malagasy	•	•	•	•	

Personal Projects

⟨/> MK-Forum **𝚱** 2023

Creation of a forum dedicated to mathematics, using HTML, CSS/Bootstrap, and JS for the front-end, and Python/Django and MySQL for the back end. The project includes user account management, posts, comments, and a voting system.

⟨**/>** FCryptos **Ø**2023

Implementation of various cryptographic systems using Python, like Shift cypher, Vingenere cypher, SPN, RSA, and ENIGMA machine.

Unbeatable TicTacToe

2022

Implementaion of the Tic-Tac-Toe game using HTML, CSS and JavaScript. It has an automated computer player that uses a combination of random placement and min-max algorithm to make each move depending on the chosen level.

Pendu Malagasy 🔗

2022

Implementation of the hangman game using Tkinter an Python. The list of words is Malagasy by default but can be changed easily.

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Bellman Kalaba GUI &

2021

Implemention of a graphical interface for graph representation and short-path finder with the Bellman-Kalaba algorithm with Tkinter/Python.

Extracurricular

*	Business Management (One month) ESMT Berlin, II Africa, IIP – Limbé, Cameroon	2023
*	Back-end developer (Six months) SAYNA & OIF: DCLIC Program 1.0 - Fianarantsoa, Madagascar	2022
*	Probabilistic and statistical modeling in epidemiology and environment CIMPA – Fianarantsoa, Madagascar	2021

Prizes/Awards/Scholarships

Tully funded Master's Program in ML and AI: DeepMind Scholarship.	2024
모 Industry Immersion Program (IIP) Scholarship: AIMS, II Africa, ESMT Berlin.	2023
모 Fully Funded Master's Program, AIMS Cameroon: Mastercard Foundation in Cameroon.	2022
Fully Funded D-CLIC 1.0 Programs: SAYNA and the Organisation International et de la francophonie (OIF).	2022

Interests

Hiking, Football, Guitar, Malagasy Al