

HOUNGBEDJI Mahutondji Emmanuel

Email	mahutondji@aims.edu.gh
Phone	+229 0162250607
Online Profiles	LinkedIn GitHub

EDUCATION

Oct 2024 – Jul 2026	Institut de Mathématique et de Sciences Physiques (IMSP) Dangbo, Benin MSc in Statistics-Probability
Sep 2023 – Jul 2024	African Institute for Mathematical Sciences (AIMS) Accra, Ghana MSc in Mathematical Sciences Thesis: <i>Integrated Risk Management under Operations Revenues Insurance</i>
Oct 2019 – Jul 2022	Ecole Normale Supérieure (ENS) Natitingou, Benin BSc in Mathematics and Computer Science Thesis: <i>Using GeoGebra software to address 8th grade student's difficulties in understanding special concepts</i>
Oct 2018 – Jun 2019	Collège Catholique Pierre Joseph de Clorivière Abomey-Calavi, Benin Baccalaureate in Science and Technology

RESEARCH PROJECTS

Apr 2024 - Jun 2024	Master's thesis: <i>Integrated Risk Management under Operations Revenues Insurance</i> <ul style="list-style-type: none">Development of a mathematical model for IRM with ORI, offering explicit solutions for Gaussian returns without variance spread;Optimal allocation equation accounting for covariance differences between historical and risk-neutral probabilities;Empirical analysis using data from four major US high-tech industries.
Oct 2021 – Mai 2022	Bachelor's thesis: <i>Using GeoGebra software to address 8th grade student's difficulties in understanding special concepts</i> <ul style="list-style-type: none">Identification of challenges faced by students in recognizing relative positions of lines and planes in the space;Using GeoGebra in classroom settings to teach the relative positions of lines and planes in 3D space;Tested and validated the method using descriptive and inferential statistics, achieving a 0.21 effect size that demonstrated significant improvement in student comprehension.

PROFESSIONAL AND WORK EXPERIENCE

Jul 2025 - Aug 2025	Volunteer Teacher Women in Machine Learning and Data Science (WiMLDS), University of Ghana <ul style="list-style-type: none">Designed and delivered a comprehensive course on Optimization in Machine Learning, covering gradient descent, stochastic methods, and convex optimization principles;Assisted learners in applying optimization techniques to real-world datasets and projects
Jul 2024 - Aug 2024	Summer School on Artificial Intelligence organized by the Vallet Foundation in partnership with UNDP

-
- Programming, Machine Learning and Embedded Electronics (including Robotics and Home Automation);
 - Designed and implemented a “**Person-following Drone**” project, integrating computer vision (Open CV) and real-time object tracking algorithms.

Apr 2024- May 2024 Volunteer Teacher | Women in Machine Learning and Data Science (WiMLDS), University of Ghana

- Delivered introductory probability theory lessons to around 30 undergraduate students;
- Prepared and presents engaging course materials to foster understanding of foundational concepts in machine learning and data science.

February 2024 STEM Education Volunteer | Mastercard Foundation Scholars program, Ledzokuku-Krowor municipal Schools, Ghana

- Helped demystify common misconceptions about Mathematics and STEM education;
- Collaborated with educators to develop accessible learning approaches for secondary school students.

Oct 2022- Jun 2023 Teaching & Private Tutoring Experience | Abomey-Calavi, Benin

- Designed and implemented engaging lesson plans for secondary school students, assessing progress through exams, homework corrections, and personalized feedback.;
- Clarified complex concepts in physics (mechanics, optics) and advanced mathematics through real-world examples.

Oct 2021- May 2022 Teaching Intern, Collège d’Enseignement Général 1 Djougou (CEG 1 Djougou) | Benin

- Taught mathematics to around 250 secondary students across 6 classes during professional training, applying modern pedagogical techniques to enhance learning;
- Supported curriculum implementation and student assessment processes, ensuring effective evaluation and academic progress.

AWARDS AND SCHOLARSHIPS

2023- 2024 AIMS' fellowship

2019- 2022 Government bursaries for undergraduate studies

2016 Best Student Award – 9th Grade Cohort, Private School Brice SINSIN, Benin

SKILLS

Software MS office, Latex, Libre Office, GeoGebra

Programming R, Python, Matlab, C, C++

Languages English (B2 level), French (Native proficiency)

Soft Skills Leadership, Excellent communication skills, Independent worker.