

Emmanuel Agbeli

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Education

- 2019 – 2021 **MSc. Machine Intelligence**, *African Institute for Mathematical Science Kigali, Rwanda*
Program description: *A novel fully funded one-year intensive graduate program that provides brilliant young Africans with state-of-the-art training in machine learning and its applications.*
Advisor: Dr. Naila Murray
- 2017 – 2019 **MSc. Mathematical Sciences**, *African Institute for Mathematical Sciences (AIMS), Senegal*
Program description: *AIMS is a Next Einstein Initiative (NEI) belonging to a pan-African network of excellence for postgraduate education, research, and outreach in mathematical sciences.*
Advisor: Prof. Arne Ring
- 2012 – 2016 **BSc. Statistics**, *Kwame Nkrumah University of Science and Technology, Kumasi, Ghana*
Advisor: Dr. Nana Kena

Work Experience

- April 2022 – **Data Scientist-Lead**, *AyaData, Ghana*
Date **Duties/Responsibilities:**
 - Developing detection pipeline for annotated images data: Palm Tree Counts.
 - Creating Scripts for data cleaning and feature extraction from text and vision datasets.
 - Providing guidance and training on setting up a well curated dataset for ML Solutions.
- Mar 2021 – **Data Scientist**, *Yemaachi Biotech Company, Accra, Ghana*
Mar 2021 **Duties/Responsibilities:**
 - Data wrangling and cleaning for Dashboard display: Covid-19 Dataset.
 - Data scraping and extraction of known target genes for selected therapeutic drugs.
 - Scripting an end-to-end pipeline for data migration from google docs to MySQL database.
- Oct 2020 – **Machine Learning Engineer(Part-time)**, *Dataware Tech Ghana Limited , Accra, Ghana*
Feb 2021 **Duties/Responsibilities:**
 - Develop credit scoring models to evaluate the liquidity of customers requesting for loans.
 - Build a sentiment analysis tool to assess the feedback of clients.
 - Organizing training sessions for financial institutions on the use of ML in their daily operations.
- Jul 2019 – **Data Scientist and Research Apprentice**, *International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), Dakar, Senegal*
Sep 2019 **Duties/Responsibilities:**
 - To design parametric weather indices for crop insurance, triggers and optimization payout rate for smallholders farmers.
 - Developing tools combining parametric and non-parametric with compliance monitoring to strengthen product marketability.
- Jun 2018 – **Data Scientist – Intern**, *Saham Insurance, Kigali, Rwanda*
Dec 2018 **Duties/Responsibilities:**
 - Evaluation of claims frequency and severity using analysis tools.
 - Estimation and comparison analysis of loss ratio of motor insurance.
 - Updating of claim reserves of the department.
- Jun 2014 – **IT-Assistant-Intern**, *Local government,, Tema, Ghana*
Aug 2014 **Duties/Responsibilities:**
 - Providing assistance to the usage of analysis tools in the HR office.
 - Collection and collation of progress report from various departments.

Teaching/Instructor Experience

- July 2021 **Teaching Assistant**, *Neuromatch Academy Deep Learning Summer School*, Online
Duties/Responsibilities:
- Facilitating and guidance of students from different countries pod discussions.
 - Aiding students to solve challenging tasks in deep learning for their projects.
- Sep 2016 – Jul 2017 **Teaching and Research assistant**, *University of Energy and Natural Resources, Sunyani, Ghana*
Duties/Responsibilities:
- Organize a preparatory tutorials for students.
 - Prepare and mark scripts and projects.
 - Assisting the final year students in their research projects.

Research Experience

- 2020 – 2021 Master's thesis: Self-supervised domain adaptation for visual representation learning, *African Institute for Mathematical Sciences, Rwanda*
- 2018 – 2019 Master's thesis: Machine learning in Game theory. Case Study: Tennis on paper, *African Institute for Mathematical Sciences, Senegal*
- 2015 – 2016 Bachelor's project: Spectral Analysis of Rainfall time series data. Case study: Kumasi Metropolis Rainfall trends., *Kwame Nkrumah University of Science and Technology: Ghana*

Research Interests

Statistical Inference, Probabilistic Models, Image, text and speech processing, Applied Machine and Deep Learning: Vision and Reinforcement learning, Computational Biology

Grants, Scholarships and Academic Honours

- Oct, 2020 Google and Meta Scholarship, AMMI-Rwanda
- Jan, 2019 Mathematical Science for Climate Change Scholarship
- July, 2019 Alumnode Grant worth 4760 euros
- Sep, 2018 DAAD Grants for AIMS-TUC Workshop
- Sep, 2017 Next Einstein Initiative Scholarship
- Sep, 2016 KNUST awards for undergraduate student attaining 1st class honors

Conference, Seminar and Workshop Participation

- April, 2022 Google NLP workshop -Ghana Research Lab, Accra-Ghana
- Dec, 2021 Neural Information Processing Systems, Online
- July, 2021 Neuromatch Academy Summer School, Online
- Dec, 2020 34th Neural Information Processing System Conference, Online
- Sep, 2020 Participated in Heidelberg Laureate Forum, Germany, Online
- May, 2019 45th International Conference on Acoustics, Speech, and Signal Processing
- April, 2019 Ghana Data Science Summit, Accra Ghana
- Feb, 2019 Winter School on "Applied Non-Linear Dynamics", Senegal
- Sep, 2018 AIMS-Senegal Workshop on Applied Mathematics, TU Chemnitz University- Germany.

Volunteerism & Other Activities

- Dec 2021 Moderator for Neurips Black in AI workshop
- Sep 2020 - Natural Language Processing Ghana Group.
Date
- July 2019 Co-organizer for Bridging the STEM Gap in Rural Africa.

June 2020 Mentor for PyLadies Data Science in Ghana.

Summary of Skills

Technical and Scientific Skills

Machine Learning, Problem solving, Data Analytic, Programming, Communication and Writing skills.

Computer / Computing Skills

Operating Systems: MICROSOFT WINDOWS and LINUX (Bash scripting) | Programming Languages: PYTHON, R and MATLAB | Deep Learning Frameworks: PyTorch and Tensorflow | Cloud: GCP and Google colab | Database Management: MySQL | Version Control: Github

Soft Skills

Effective team player, Communication, Interpersonal Relationship, Minimal Supervision, Flexibility

Language Skills

English (Fluent), French (Beginner), Ewe (Native)

Referees

Dr. Naila Murray Senior Research Engineer | *EMEA-Meta AI Research*, Email:murray@fb.com

Dr.Jean-Claude Postdoctoral Research Fellow| *Africa Institute for Mathematical Sciences*
Email:jeanclaude@aims-senegal.org

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