

KOBBY PANFORD-QUAINOO

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EDUCATION

**African Institute for Mathematical Sciences -
African Masters in Machine Intelligence, Rwanda**
MSc. Mathematical Sciences - Machine Intelligence

September 2018 - present

Kwame Nkrumah University of Science and Technology, Ghana
BSc. Physics (Major - Electronics).

July 2013 - June 2017

CAREER INTEREST

To research and contribute to solving both scientific and social problems using my skills and knowledge in Physics and Machine Learning

TECHNICAL STRENGTHS

**Programming and Data Analysis
Software & OS**

Python, (PyTorch, Tensorflow), C++, Java
Latex, Windows, Unix

LANGUAGES

English (Fluent)

French (Intermediate)

PROJECTS

Bilateral Trade modelling with Graph Neural Networks

December 2019

Leveraging the graph representation learning approach on international trade. Tasks were countries' income-level classification and potential trade partners predictions. *Master's thesis, AMMI-2019*

Spatio-temporal modelling of Malarial dataset (Kaggle)

December 2018

Presented a report and presentation on spatio-temporal modelling and predictive analysis task on malarial dataset from Kaggle. *Best Poster - Machine Learning Summer School-2019, London*

StartUp-Factory Ghana

September 2016 - August 2017

The Ever-green solar dryer

This project sought to employ various Engineering and Optimisation techniques to create an energy-efficient hybrid solar-dryer to help agricultural farmers dry their farm produce quickly at suitable temperature in all weather conditions.

StartUp-Factory Ghana

September 2015 - August 2016

The smart tropical Housing Project

This is a collaboration between the TecUp and Sustainable energy department of the Universität Paderborn-Germany and the Physics department of Kwame Nkrumah University of Science and Technology-Ghana to invent an Energy-efficient housing well suited for the tropics.

ACADEMIC AND RESEARCH EXPERIENCE

Kwame Nkrumah University of Science and Technology, Ghana

September 2017 - August

2018

Teaching and Research Assistant

- Organised tutorials in courses: Programming with C++ (I & II) and Introductory Electronics (I & II) for Physics, Meteorology and Climate Science and Computer Science students
- Supervised Physics and Electronics Laboratory work and assigned grades for lab reports

Vector Institute, Canada
Research Intern

September 2019 - present

- Project: Modelling Patient Treatment Trajectories from longitudinal data using Graph-based Approaches.
Supervisor: Dr Marzyeh Ghassemi, Assistant Professor - University of Toronto, Faculty Affiliate - Vector Institute
- Project: Causal Inference for Interacting Systems.
Supervisor: Richard Zemel, Professor - University of Toronto, Research Director - Vector Institute

SEMINARS AND INVITED TALKS

- Talk - "Challenges in Healthcare Representation Learning and Proposed Approaches"
 Google Brain - Toronto, Canada *June 2016*
- Tutor - "Introduction to Machine Learning"
 Deep Learning IndabaX - Rwanda *April 2019*
- Seminar on "Non-Linear Dimensionality Reduction with ISOMAP"
 African Institute for Mathematical Sciences, Rwanda *November 2018*
- Presentation on "The Coliform removal efficiency of selected water filters on the Ghanaian Market"
 Universität Paderborn, Germany *June 2016*

VOLUNTEERING

- Tutor - "Introduction to Machine Learning"
 Deep Learning IndabaX - Rwanda *April 2019*
- Volunteer -
 "Vector Institute Evolution of Deep Learning Symposium (in honor of Geoffrey Hinton)" *November 2019*

ACADEMIC ACHIEVEMENTS

- DeepMind Conference Travel Award** - Deep Learning Indaba, Kenya *September 2019*
- PyTorch Scholarship Challenge (Udacity - Facebook)** *November 2019*
- Full Scholarship** - African Masters in Machine Intelligence
 (Acceptance rate - 3.45%) *September 2018 - present*
- Certificate of Excellence - Great Technical Support**
 African Masters in Machine Intelligence, AIMS *December 2018*
- Student Travel Award to Germany and Research Grant (DAAD/TecUP/Universität Paderborn)** -
 Kwame Nkrumah University of Science and Technology *June 2016*

REFERENCES

Moustapha Cisse

Founder and Director - African Masters in Machine Intelligence (AMMI)

Lead - Google AI Research, Ghana

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Richard Zemel

Research Director - Vector Institute, Canada

Professor,

Department of Computer Science,

University of Toronto, Canada

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Blaise Tchapnda

Academic Director and Professor,

African Institute for Mathematical Sciences, Rwanda

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