## ENGELBERT TCHINDE WAMBA Data Scientist | Machine Learning | Al Enthusiast

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I am a dynamic, passionate and optimistic individual who seeks to achieve best results from limited time and resources. Following an intensive Machine Learning Master program hosted by the African Institute For Mathematical Science (AIMS) in partnership with Facebook and Google. This Master with 6% of acceptance rate. This program allowed me to acquire programming and data analysis techniques and specifically data engineering, machine learning, advanced analytics skills. I aspire to join and work with an industry that is interested in modelling and solving problems of any kind, and also build a model and advanced data analysis.

#### **EDUCATION**

Jan 2021-Now

An intensive Machine Learning Master program hosted by the African Institute For Mathematical Science in Senegal (AIMS) in partnership with Facebook and Google, Majoring in Machine Intelligence

Introduction to Machine Learning, Optimization for Machine Learning, Foundations of Ma-

chine Learning, Convolutional Neural Networks, Foundations of Deep Learning, Natural Lan-

guage Processing (NLP), Reinforcement Learning, Computer Vision.

Building a deep learning model for spatial data analysis (in progress) Thesis:

Final Grade: Not available

2019-Feb 2021

Master in Mathematical Science (Big data and computer security), African Institute for Mathematical Sciences (AIMS), Senegal

Data Science, High Dimensional Data Analysis, Data Engineering, Probabilitics and Statistics, Modules:

Networking and Security, Elliptic Curves and Cryptography, Continuous Numerical Optimiza-

Thesis: Cryptanalysis and algebraic computations: Gröbner basis based cryptanalysis of cryptosys-

tem and analysis of a multivariate public key scheme.

Final Grade: Very Good Pass (Above 80%)

Master's degree in Applied Mathematics, Partial Differential Equations (PDEs), University of Dschang, Ca-2017-2019

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**Thesis:** Black hole geometry of Reissner-Nordström.

Final Grade: Good Pass (Above 70%)

2014-2017 Bachelor's degree, Majoring in Mathematics and Computer Science, University of Dschang, Cameroon

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RESEARCH INTERESTS

- > Data Science
- > Machine Learning
- > Deep Learning
- > Artificial Intelligence

- > Data Analytics
- > Data Mining
- > Statistical Modeling
- > Optimization

### **EXPERIENCE**

November 2021 September 2021

#### PMI-Internship | Ishango.ai, KIGALI, Rwanda

Use remote sensing to identify classify farm fields in the target country.

Remote sensing Python Google Earth Engine QGIS

January 2021 October 2020

### Research trainee | SATWII Solutions, QUEBEC, Canada

- > Find an innovative optimization algorithm to solve an optimal power flow problem
- > SATWII Solutions is a Quebec-based company founded by Dr. Nassirou Lo specializes in the development of innovative technological tools that facilitate strategic and tactical planning.

MatLab

2019 2018

### Teaching Assistant, ABSDs, Association of Bansoa Students of Dschang

> Helped students in the disciplines they encounter a lot of problem

- > Taught classes in some scientific subjects : Mathematics, Physics
- > Organized, advertised and published any event organized by the association

Microsoft word

2016

#### Project Group Leader, PROJECT, University of Dschang

- 2015 > Created a web pages
  - > Created a dynamic web pages

HTML CSS

# 📑 IT Skills

**Programming Language** Python, Java, R, HTML & CSS

> Software MatLab, SageMath, ArcGIS

Data Pipeline Modelling, Data Pre-processing, Data Cleaning, Data Visualization Data Science Regression, Classification, Clustering, Tree Based Algorithms, Bagging, Boosting Machine Learning

**Deep Learning** Neural Network, CNN, RNN, LSTM, Transformer architecture, PyTorch, Tensorflow, Keras,

OpenCV

**Tools & Libraries** Spacy, SciSpacy, Pandas, Sklearn, Jupyter, Anaconda, Numpy, Seaborn

Data Base Microsoft SQL Server, MySQL, PostgreSQL

Eclipse, Visual Studio Code, git Development tools

Operating systems Mac OS Sierra, Windows 10, Windows 7, Linux Centos



#### LANGUAGES



French • ( English • • • • •

- > Passionate
- > Rigorous
- > Motivated
- > Autonomous

# PROFESSIONAL ONLINE TRAINING

- 2020 Certificate of completion in Cybersecurity Essentials issued by Cisco Networking Academy
- Badge in Cybersecurity Intro issued by IBM check here 2020
- 2020 Badge in Python issued by IBM check here
- Certificate in Real-Time Cyber Threat Detection and Mitigation issued by Coursera check here 2020
- 2020 Certificate in Python Functions, Files, and Dictionaries issued by Coursera check here
- Certificate in Introduction to Data Science in Python issued by Coursera check here 2020
- 2020 Certificate in Data Collection and Processing with Python issued by Coursera check here

# COMPETITIONS PARTICIPATED

- 2021 Certificate of participation in the PRAIRIE / MIAI Artificial Intelligence Summer School (5th - 9th July)
- 2021 Participation on Zindi Hackathon in AIMS Data Science
- Participation on Kaggle challenge: Cassava disease classification 2021
- 2020 Certificate of participation in the cyber security hackathon issued by BeOpenIT in Senegal
- 2020 Certificate of participation in the IT, IoT and security hackathon issued by ActInSpace in Senegal

### AWARDS AND SCHOLARSHIPS

- > Masters Scholarship awarded by AMMI (African Masters Of Machine Intelligence) in Senegal (2021)
- > Masters Scholarship awarded by AIMS (African Institute for Mathematical Sciences) in Senegal (2019)
- > Academic excellence award from University of Dschang (2015, 2016, 2017, 2018)

# ORAL PRESENTATION

February 2021 Oral presentation of my Master thesis at AIMS Senegal

2020 Oral presentation of our project of challenge ActInSpace at Dakar, Senegal

July 2019 Oral presentation of my Master thesis at University of Dschang, Cameroon



#### APPLICATION OF OPTIMIZATION TO THE OPTIMAL POWER FLOW PROBLEM

OCTOBER 2020 - JAN 2021

Template on Overleaf
This project allows us to find an innovative algorithm which will be use to maintain the balance between the supply and demand of electricity.

MatLab

CRYPTANALYSIS AND ALGEBRAIC COMPUTATIONS: GRÖBNER BASIS-BASED CRYPTANALYSIS OF CRYPTOSYSTEM AND ANALYSIS OF AMULTIVARIATE PUBLIC KEY SCHEME MAY 2020 - JULY 2020

☑ Template on Overleaf

This project allows us to know if it is possible to break some cryptographic schemes. Since its purpose is to analyze the security of a multivariate public key cryptosystem using Gröbner's bases, we showed using Gröbner's bases that it is possible to break cryptographic schemes when we have small key length.

LATEX SageMath

#### BLACK HOLE GEOMETRY OF REISSNER-NORDSTRÖM

MARCH 2019 - JUNE 2019

This project shows the behaviour of geodesics close to the black hole singularity whose geometrical framework is the Reissner-Nordström one.

MEX