

# CEDRIC P.-E. MANOUAN

## DEEP LEARNING ENGINEER - AI SPECIALIST

Contact : +225 07 59 20 15 98 | Email: [manouancedric@gmail.com](mailto:manouancedric@gmail.com) | LinkedIn: [Cédric Pascal-Emmanuel Manouan](#)  
Github: [dric2018](#) | Website: [dric2018.github.io](https://dric2018.github.io)

### WORK EXPERIENCE

---

#### Project Analyst – AI Associate Specialist (ST Consultant)

April 2024 – *present*

International Finance Corporation (IFC), World Bank Group

Abidjan, Côte d'Ivoire & Remote

- AI and Startup Ecosystem Policy Research (West and Central Africa)
- Reviewed regulatory environments; assisted CAE team in stakeholders consultations and country advisory
- Assessed AI solutions developed in agtech, healthtech, createch, e-mobility, e-transport, and edtech
- Organized workshops and roundtable discussions engaging diverse stakeholders
- Analyzed data on funding mechanisms and innovation support programs
- Represented CAE's Startup and AI project team during the preparation of the WB RAPID-CI Program
- Co-authored 3 AI landscape reports on startups and AI covering Cameroon, Côte d'Ivoire and Senegal
- TTLs: Mrs. Meritxell Martinez, Ms. Menan Omar

#### Consultant - Lead AI Engineer

July 2024 – June 2025

Carnegie Mellon University Africa (CMU-Africa), Wakanda AI, AFRETEC Network

(Remote) Kigali, Rwanda

- Contributed to the drafting of the cross-university research proposal
- R&D: Speech processing, Language modeling, Seamless communication in African languages
- Assisted project leaders with administrative, budgeting, monitoring, and coordination tasks
- Coordinated kickoff activities with a team of 4 Associate Researchers from CMU-Africa
- Supported the team's preparation for the Summer 2025 AFFRETEC PI Meetings in Kigali

#### Consultant - Rwanda AI Readiness Assessment (AIRA)

October 2023 – March 2024

Techclick, UNDP & Ministry of ICT and Innovation (MINICT)

Kigali, Rwanda

- Supported the UNDP team with the qualitative assessment of the AI landscape
- Conducted interviews with key informants from government institutions
- Contributed to clarifying the roadmap for the implementation of the National AI Policy

#### Research Associate (AI & Robotics)

May – December 2023

Carnegie Mellon University Africa (CMU-Africa)

Kigali, Rwanda

- Assisted Prof. David Vernon with the development of a Semantically-modulated Joint Episodic-Procedural (S-JEP) Working Associative Memory
- Proposed and implemented RT1-CRAM, a candidate S-JEP architecture
- Managed team's allocation and executed model training jobs on CMU's Bridges-2 supercomputer

#### Graduate Research and Teaching Assistant

Fall 2022 & Spring 2023

Carnegie Mellon University (Remote)/CMU-Africa (In-Person)

Pittsburgh, PA/Kigali, Rwanda

- Assisted Prof. Bhiksha Raj in [11785 - Introduction to Deep Learning](#):
  - \* Developed automated grading scripts for evaluating ML/DL modules
  - \* Conducted ablation studies across speech recognition, face classification, and Speech-to-Text using state-of-the-art models
  - \* Prepared and co-led homework assignments on Image processing and Language Modeling
- Assisted Dr. Moise Busogi in [04800-AB Machine Learning for Earth Observation \(ML4EO\)](#):
  - \* Research project in ML4EO supervised by Dr. Moise Busogi:  
[Reba: Rethinking Malaria Prevention Through Satellite Earth Observation](#)

#### AI Analyst Intern

June 2022 – July 2022

Ivorian Electricity Company (CIE)

Abidjan, Côte d'Ivoire

- Initiated work on EasyBot: (French) Text analysis and classification with NLP techniques
- Data preparation for text messages received from a chat application
- Development of baseline AI models leveraging TF-IDF and BoW

**Software Engineering/Data science Intern**

Zindi

April 2021 – July 2021

Remote from Senegal

- Supported with the preparation of data science competitions
- Prepared starter notebooks and built baseline ML models

**Developer Intern**

May 2019 – July 2019

BSc. End-of-Cycle Project - First Class Honors/Mention Très Bien

Project of Digital Solutions for the opening up of Rural Areas and e-Agriculture

(PSNDEA): [Thesis \(French version only\)](#)

Abidjan, Côte d'Ivoire

- Built an Internet of Things (IoT) system for data acquisition in a cassava field; System design used a Raspberry Pi running tensorflowJS
- Developed a NodeJs REST/CRUD API using MySQL to manage both sensors and farmers inputs
- Developed and deployed a regression model to predict the yield of a given field based on real-time and stored data

---

**EDUCATION****Master of Science | Information Technology - Applied Machine Learning**

August 2021 – May 2023

Carnegie Mellon University - College of Engineering, CMU-Africa

Kigali, Rwanda

**Master of Science (Semester 7) | Information Systems and Software engineering**

October 2019 – March 2020

Ecole Supérieure Africaine des TIC (ESATIC)

Abidjan, Côte d'Ivoire

**Bachelor of Science | Systems, Computer Networks and Telecommunications**

October 2016 – September 2019

Ecole Supérieure Africaine des TIC (ESATIC)

Abidjan, Côte d'Ivoire

---

**SKILLS****Consulting:** AI Policy, AI engineering; project Management.**Programming (Python/C++) & Software/AI Engineering:** Data structures and Algorithms; Deep Learning (PyTorch/Lightning; Transformers); API development (FastAPI/NodeJS), Amazon Web Services (AWS/EC2), Job scheduling, resource management, and batch script development on high-performance computing (HPC) systems using SLURM.

---

**HONORS AND AWARDS****Mastercard Foundation Scholarship**

2021 – 2023

To support international students joining graduate programs at Carnegie Mellon University.

Completed the Marketplace Readiness Leadership Training Programme.

Rwanda, Kigali

---

**LEADERSHIP & COMMUNITY INVOLVEMENT****ACCESS Researcher Advisory Committee Member**

2023 - 2025

Making suggestions to improve allocations, support, and operations.

Remote, USA

**International Conference on Learning Representations (ICLR)**

Spring 2023

Volunteered at ICLR 2023, actively contributing to assisting attendees, and ensuring smooth operations.

Acknowledged with a certificate of appreciation available [here](#).

Rwanda, Kigali

**Data Science Club**

December 2021 – November 2022

President and Coordinator

Rwanda, Kigali, CMU-Africa

**Zindi University Ambassador**

June 2020 – July 2021

Co-lead of the platform development group (improvements and new ideas)

Côte d'Ivoire, remote

## REFERENCES

---

1. Prof. Bhiksha Raj	Professor, Language Technologies Institute, CMU	bhiksha@cs.cmu.edu
2. Prof. Mark Kryder	Emeritus ECE Professor, CMU	mk6x@andrew.cmu.edu
3. Dr. George Okeyo	Director of Academics, CMU-Africa	gokeyo@andrew.cmu.edu
4. Mrs. Armelle Gnassou	Deputy Director, DSTD/Ivorian Electricity Company	nagnassou@cie.ci
5. Mr. Paul Kenedy	Chief of Staff, Zindi	paul@zindi.africa

## FEATURED PROJECTS

---

### **Wakanda AI - Advanced Speech Technologies for African Languages (2024-2027) | CMU-Africa**

**Role:** Consultant (AI Engineer), Principal Research Associate

\$250,000 Research grant to Advance the Inclusive Digital Transformation of Africa, funded by the Mastercard Foundation through the AFRETEC Network.

- PI: Prof. Bhiksha Raj, Language Technologies Institute, Carnegie Mellon University
- Co-PIs: Dr. Moise Busogi (CMU-Africa), Dr. Abraham Nyete (University of Nairobi)

### **Artificial Intelligence Policy | Kigali**

Dec. 2023 - Jan. 2024

Independent analysis of the Rwandan Case:

- A Light Economic Analysis of Rwanda's National AI Policy. [Check analysis](#)
- A Strategic Proposal for AI Implementation in Rwanda. [Check analysis](#)

### **NLP & Robotics - Robotics Transformer for CRAM (RT1-CRAM) | CMU-Africa**

Fall 2023

PyTorch re-implementation of RT-1 for the generation of robot actions represented as sequences of text tokens composed of the parameters to a CRAM generalized action plan.

**Project link:** [S-JEP \(RT1-CRAM\)](#)

### **Hackade - Abstract Reasoning Challenge | ZINDI**

July 2025

Built an LLM-based model that solves variants of ARC-AGI puzzles with about 32% accuracy.

Proposed solution tested on both Mac (MLX) and CUDA-enabled workstations.

Got selected as one of the winners of a sponsored flight to attend Deep Learning Indaba 2025.

**Ranking:** 10<sup>th</sup>, [\\_MUFASA\\_ on the leaderboard](#)

**Project link:** [ARC Challenge Africa](#)

### **Data science competition - Image classification | ZINDI**

Fall 2020

Developed a machine learning model to classify Tuberculosis and Normal X-Ray images for an educational purpose.

**Ranking:** 7<sup>th</sup>, [Team DataLabCI on the leaderboard](#)

**Project link:** [Tuberculosis X-Rays classification](#)

### **Data science competition - Audio classification | ZINDI**

Fall 2020

Contributed to the development of a machine learning model to classify audio utterances in Luganda and English from Uganda.

**Ranking:** 7<sup>th</sup>, [Team wakanda on the leaderboard](#)

**Project link:** [GIZ-NLP-Agricultural-Keyword-Spotter](#)

### **Data science hackathon - Image classification | ZINDI**

Fall 2020

Contributed to the development of a machine learning model to identify whether a person in an image is wearing a face mask or not.

**Ranking:** 3<sup>rd</sup>, [Team TheCIA on the leaderboard](#)

**Project link:** [Face mask classification](#)