

CEDRIC P.-E. MANOUAN

Contact : +250 (0) 791 591 607 | **Email:** cmanouan@andrew.cmu.edu |
Linkedin: Cédric pascal-emmanuel MANOUAN | **Github:** dric2018

SUMMARY

Software/Machine learning engineer with a focus on deep learning for over 3 years.
Hard-worker with the ability to work independently and with a good team spirit.
Experience in deep learning projects for Natural Language Processing and Computer Vision: end-to-end development from data preparation/exploration to model definition and optimization.
Ability to evolve and work efficiently in a collaborative environment (even remotely).

EDUCATION

Master of Science | *Information Technology - Applied Machine Learning* August 2021 – May 2023
Carnegie Mellon University 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) - See degree certificate here Abidjan, Côte d'Ivoire

WORK EXPERIENCE

Graduate Research and Teaching Assistant Fall 2022
Carnegie Mellon University Kigali, Rwanda

- Assisting Prof. Bhiksha Raj in 11785 - Introduction to Deep Learning
- Research on Remote sensing/ earth observation supervised by Dr. Moise Busogi

Software engineering/Data science Intern May 2021 – July 2021
Zindi Remote (From Senegal to South Africa)

- Data science competitions preparation

Developer Intern (BSc. end project) April 2019 – June 2019
Project of Digital Solutions for the opening up of Rural Areas and E-Agriculture (PSNDEA) Abidjan, Côte d'Ivoire

- Built an Internet of Things (IoT) system for data acquisition in a cassava field
- Developed a REST CRUD API based on NodeJs and MySQL to store data from both sensors and farmers inputs
- Developed a regression model to predict the yield of a given cassava field based on real-time and stored data
- Deployed the machine learning model to an edge device (Raspberry Pi 3) using tensorflowJS

SKILLS

Languages: French (Native), English (Bilingual, Professional)

Programming:

- Python
 - * **Scientific computation:** NumPy
 - * **Data visualization:** Plotly (interactive), Matplotlib, Seaborn
 - * **Data manipulation:** Pandas
 - * **Machine learning toolkit:** Scikit-learn, Lightgbm, Xgboost, Streamlit
 - * **Deep learning toolkit:** PyTorch, Tensorflow/Keras
 - * **API development:** Flask, FastAPI
- C++
 - * Data structures and Algorithms
- Bash/task automation
- JavaScript

- * Backend development with NodeJS
- HTML/CSS/web development (**intermediate**)

Document Creation: Microsoft Office, LaTeX, Markdown

Cloud computing / Code management / DevOps: Git, Docker, Amazon Web Services (EC2/ECS)

Operating Systems: Ubuntu, Mac OS

PROJECTS AND RESEARCH

Course project - Recommender Systems CMU-Africa	Fall 2022
Developed a Content-Based Recommender system for scientific papers as part of my mini project for 04800-B Intro to recommender systems at Carnegie Mellon university-Africa	
Project link : CBRs for scientific papers	
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 th /104, Click and look for 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 th /255, Click and look for team wakanda on the leaderboard	
Project link : GIZ-NLP-Agricultural-Keyword-Spotter	
Data science hackathon - Image classification ZINDI	Fall 2020
Contributed to develop a machine learning model to identify whether a person in an image is wearing a face mask	
Ranking : 3 rd , Click and look for team TheCIA on the leadernoard	
Project link : Face mask classification	
1st prize Hackathon Level 2 (48h) - Image recognition ESATIC	May 2018
Contributed to the development of a deep learning model to recognize west African bank notes and coins	
1st prize Hackathon Level 1 (24h) - Cryptography ESATIC	May 2017
Contributed to research and writing in C++ the encryption algorithm behind an executable program	

HONORS AND AWARDS

Master Card Foundation Scholarship	2021 – 2023
Merit based scholarship to support international study experiences (at Carnegie Mellon University)	

COMMUNITY INVOLVEMENT

Data Science Club	December 2021 – November 2022
Lead and coordinator	Rwanda, Kigali, CMU-Africa
• Participants recruitment for Zindi UMOJAHACK 2022 (enrolled 30+ new users)	
Data Science Côte D'Ivoire	2020 – Present
Free tutoring for local students/AI enthusiasts	Côte d'Ivoire, remote
Zindi University ambassador	June 2020 – July 2021
	Côte d'Ivoire, remote
• Participating in competitions and hackathons on the platform (username : _MUFASA_)	
• Co-lead of the platform development group (improvements and new ideas)	
• Participants recruitment for UMOJAHACK 2021 (enrolled 15+ new users)	
Co-founder of the Internet of Things and Artificial Intelligence club	2019
ESATIC	Abidjan, Côte d'Ivoire