CHARLES ITA EKANEM

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Profile

Aspiring Research Engineer with hands-on experience in Network Engineering and a B.Eng in Computer Engineering. Seeking research-based graduate studies or job opportunities in Neural Networks, Signal Processing and Telecommunications. Skilled in Machine Learning, Embedded Systems, Networking and Dataset Creation/Curation.

Education

Nile University of Nigeria, Abuja, Nigeria   Feb 2021 – Nov 2025
Bachelor of Engineering (B.Eng) in Computer Engineering
Second Class Upper (Honours), 60% UTME Scholarship
Relevant Coursework: Digital Signal Processing, Embedded Systems, Artificial Neural Networks, Computer Networks, Engineering Mathematics I-IV.

Topfaith International Secondary School, Akwa Ibom Nigeria   Oct 2014 – Nov 2020
UTME Score: 294/400.
Preparatory Prefect
Relevant Coursework: Mathematics, Physics, Data Processing, Economics, Computer Studies.

Experience

Junior Network Engineer (Intern)
Gigaxysafe Technologies, Abuja, Nigeria   Mar 2024 – Aug 2024
- Installed and configured network devices (routers, switches, VoIP systems) ensuring 99% uptime.
- Designed network layouts and optimized routing protocols.
- Structured cabling, labelling and rack organization for enterprise systems.
- Collaborated with senior engineers on network topology planning.

Projects

Multi-Engine Deepfake Detection (MEDD) System   Nov. 2024 – Dec. 2025
- Developed a deepfake detection system using CNNs and Transformers (InceptionResNetV1, EfficientNet, Vision Transformer, Swin Transformer).
- Trained on FaceForensics++, Celeb-DF V2, Openforensics datasets.
- Authored IEEE-style paper.

CBAR Speech Enhancement for Nigerian Urban Noise   2025
- Designed CNN-BiLSTM-Attention-Residual architecture for noise reduction.
- Evaluated on Nigerian urban audio datasets with improved SNR metrics by 15–20%.
- Visualized waveform and spectrogram outputs for analysis.

GAN-based Plant Growth Simulation for Talinum Triangulare   2025
- Created dataset and generated predictive plant growth images using GANs.
- Implemented pre-processing pipelines for training.

4WD GNN Route Mapping Robot   2025
- Implemented Graph Neural Networks for autonomous indoor/outdoor navigation.
- Integrated sensor data and optimized real time route planning.

Skills & Technologies

- **Machine Learning:** Deep Learning, CNNs, Transformers, GANs, Speech/Image Processing.
- **Embedded Systems:** Arduino, Sensor Integration, Hardware Prototyping.
- **Network Engineering:** LAN/WAN, Cisco Packet Tracer, Wireshark, VoIP, Structured Cabling.
- **Programming & Tools:** Python, C/C++, MATLAB, JavaScript, AWS, PyTorch, Scikit-learn, Git, Keil, Proteus, Arduino IDE
- **Technical Writing & Research:** IEEE-style papers, Documentation, Dataset Curation

Certifications

- Huawei HCIA Datacom V1 (2023)
- AWS Getting Started with Storage (2024)
- AWS Getting Started with Compute (2024)
- Cisco Computer Hardware Basics (2025)

Hobbies & Interests

- Reading
- Creative Writing and Thinking
- Football
- Professional Wrestling