EKENEDIRICHUKWU NELSON OBIANOM
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PROFILE

I am an effective communicator with excellent organisational and planning skills. I have demonstrated consistent success as a research student by recognizing specifics that others bypass. I am experienced in analysing data and building predictive models with various tools including excel, power BI, python and MATLAB. In addition, as an embedded systems designer, I design, program and construct electronic systems from prototyping to manufacturable stage. I am dynamic, proactive, and determined and will love to become an active member of a work environment where my skills are harnessed with constructive challenges.

EDUCATION

University of Leicester *2022 – 2026*
PhD in Biomedical Engineering
Title: Machine Learning algorithms for improving target identification of catheter ablation treatment for human atrial fibrillation

Bells University of Technology *2016 - 2020*
BEng (Hons) Electrical Electronics Engineering
Honors: First Class
Core Courses: Thermodynamics, Electrical/Electronic Circuits, Signals and System, Electromagnetic Fields, Logic Design, Fuzzy Logic, Non-linear Control Systems, Renewable Systems, Digital Signal Processing, Digital Control Systems.

ACADEMIA EXPERIENCE

Teaching Assistant
University of Leicester, UK. *Sept 2023 - Present*

- Prepared and delivered support classes in mathematics, programming, electrical principles, and communication systems.
- Prepared and delivered tutorials and lab sessions and carrying out assessments on the students to ensure learning progress.
- Supported module convenors in lab presentations and organisation.

Teacher
Oxford Royale Academy, Oxford, England. *July 2023*

- Prepared and delivered lectures in basic engineering.
- Prepared and delivered practical activities to improve engagement and understanding of the learners.
- Assessed and graded the students fairly, according to the curriculum guidance.
- Ensured that students were identified, catered for, and monitored intently.

- Ensured equal opportunity for all students irrespective of race, gender, or ability.
- Conscious attention to safeguarding as the students being monitored were minors.

Associate Lecturer
Federal Polytechnic Nasarawa, Nasarawa, Nasarawa, Nigeria. *May 2021 - Apr 2022*

- Prepared and delivered lectures in mathematics, electrical principles, and communication systems.
- Prepared and delivered tutorials and lab sessions and carrying out assessments on the students to ensure learning progress.
- Supported the Head of Department during his lectures and performing admin tasks in the department.
- Invigilation, marking and recording of exams and tests.

OTHER EXPERIENCE

Research Assistant
University of Leicester, UK. *Aug 2023 - Present*

- Develop and maintain databases for the storage and analysis of data.
- Analyse data using statistical and machine learning techniques and created visualizations to help communicate findings.
- Process signals to remove noise while ensuring the integrity of the signal is not compromised.
- Build machine learning models to predict medical conditions using electrocardiogram signals, electroencephalography signals and even patient data.
- Staying up to date with new analysis tools and techniques to recommend their adoption as appropriate.

Exams Invigilator
University of Leicester. *Jan 2023 - Present*

- Invigilated university exams and performed wide range of administrative duties.
- Ensured that students were identified, catered for, and monitored intently.
- Ensured equal opportunity for all students irrespective of race, gender, or ability.

Exams Invigilator
Lancaster Academy. *Jan 2023 - Present*

- Invigilated GCSE exams and performed wide range of administrative duties.
- Ensured that students were identified, catered for, and monitored intently.
- Ensured equal opportunity for all students irrespective of race, gender, or ability.
- Conscious attention to safeguarding as the students being monitored were minors.

INDUSTRIAL EXPERIENCE

Engineering Contractor

Nigeria *Jan 2021 - Sep 2022*

- Attended to prospective customers to assess their needs.
- Provided cost analysis of the requested contracts and designed systems based on customer specifications.
- Designed PCB, soldered and coupled systems and dispatched systems to concerned customers.
- Prepared Bill of Engineering Materials and Evaluation and system manual.

KEY SKILLS

Electronics: Arduino, PCB Design, Circuit building and design, Machine Learning, LTSpice
Data Tools: Microsoft Office (Word, Excel, Power Point), Tableau, Power BI
Languages: Python, Embedded C, MATLAB, Arduino, LabVIEW, HTML, Simulink
Soft Skills: Data Analytics, Teamwork, Interpersonal, Excellent communication, Leadership, Project Management, Research skills, Online research.
Other information: I hold a clean driving licence and had my last DBS check in February 2023.

CERTIFICATIONS

Teach in Higher Education - University of Leicester	*Feb 2023*
Machine Learning A-Z: Python & R in Data Science - Udemy	*Dec 2022*
Data Analysis (Certificate of Completion) - Tritek Consulting	*Sep 2022*
Health, Safety and Environment 1 (HSE 1) - World Safety Organisation	*Aug 2019*
Health, Safety and Environment 2 (HSE 2) - World Safety Organisation	*Aug 2019*
Health, Safety and Environment 3 (HSE 3) - World Safety Organisation	*Aug 2019*

PUBLICATIONS

Abdelrazik, A., Koya, A., Chauhan, R., Obianom, E., Li, X., & Ng, G. A. (2024). PO-02-099 AUTONOMIC DYSFUNCTION WITH REDUCED HEART RATE VARIABILITY FOLLOWING MYOCARDIAL INFARCT IN A RABBIT CORONARY-ARTERY LIGATION MODEL. *Heart Rhythm*, *21*(5), S302.

Biala, T.A., Ramahi, A., Ekenedirichukwu, O., Li, X. and Schlindwein, F.S., 2023, October. Use of AI to Assess Control and Diseased Children at 10 Years of Age. In *2023 Computing in Cardiology (CinC)* (Vol. 50, pp. 1-4). IEEE.

Obianom, E., Mäkynen, M., Qaqos, N., Abdullahi, S. I., Schlindwein, F. S., Ng, G. A., & Li, X. (2023, October). Predicting Cardiac Arrest Recovery with Shallow and Deep Learning Models. In *2023 Computing in Cardiology (CinC)* (Vol. 50, pp. 1-4). IEEE.

PROJECTS ACHIEVEMENTS

Personal Project (2022): Telephone

A design was proposed for a rechargeable telephone. It was to be designed with cheap DIY (Do-It-Yourself) components. The construct was completed with the use of an Arduino pro-mini for data processing and a sim800l module GSM connectivity. The telephone consisted of a screen, a 4x4 keypad, a speaker, a microphone and an extension to include external sounds during calls (like music), a ring volume control, and a charging port.

Mini Joint Project (2022): Autonomous Shopping Cart

In grocery stores, mechanisms that would improve sales and ease customer stress are constantly being searched for. This design focused on the automating the shopping cart. The shopping carts were improved to be self-driving. The system was designed to be easily integrated into any shopping mall without need to redesign the malls. It used ultrasonic sensors to map its environment and track its user while using an array of relays to control the movement of the rotation of the motors.

NITDA Hackathon (2022): Smart Farming

My team (Yieldas) came second place out of ten in the 2022 South-South version of the NITDA Hackathon competition in University of Calabar, Calabar, Cross River, Nigeria.

Project Idea

Our proposed idea was the analysis of weather forecast, NPK sensors, temperature sensors, humidity sensors, pH sensors, in conjunction with an artificial intelligence (AI) system to proffer best farm practices for local farmers at a cheap rate and all year round. With such technology, the yearly yield is prognosticated to increase. It is also estimated that the business plan team Yieldas designed around this project is estimated to regain its capital in just over a year or running the business.

REFERENCES

Available on request.