

CURRICULUM VITAE

OSEGI, EMMANUEL NDIDI

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PERSONAL DATA

Surname	Osegi
First Name / Other Names	Emmanuel Ndidi
Date of Birth	24 April 1983
Sex	Male
Nationality	Nigerian
State of Origin	Delta State
Local Government Area	Ika South (Agbor-Obi)
Marital Status	Married
Permanent Home Address	45 Rumuokparali Road, Choba, Rivers State, Nigeria
Phone / Email	+234-904-107-7879 emmaosegi@gmail.com
NYSC Status	Exempted — Letter of Exclusion from National Service, NYSC Directorate Headquarters, Ref. NYSC/CMD/LT.No 2006/0258, dated 9 September 2007 (Part-Time HND graduate category)

CAREER OBJECTIVE / PROFILE

Engineer, applied AI/ML researcher, and educator with over ten years of experience spanning electrical/electronic engineering practice, embedded systems design, robotics, intelligent control, and machine learning research. Holds a Master's degree in Information Technology, a Postgraduate Diploma in Information Technology, a Higher National Diploma in Electrical/Electronic Engineering, and a Nigerian Certificate in Education in Electrical/Electronic Technology, and is currently registered for a PhD in Artificial Intelligence. Proven record of curriculum-adjacent training, capstone project supervision, industry-academia partnership building, and applied research culminating in 12+ peer-reviewed publications and a book chapter with an international academic publisher. Seeking a lecturing appointment in Electrical/Electronic Engineering, Computer Engineering, Mechatronics Engineering, or Computer Science within a Nigerian tertiary institution, where technical depth, teaching commitment, and an active research profile can contribute to departmental growth and student development.

EDUCATION / ACADEMIC QUALIFICATIONS

PhD, Artificial Intelligence (in progress) — National Open University of Nigeria (ACETEL)
2025 – Present | Thesis: Multi-Agent Hybrid Optimization System for Energy Management in Green Data Centers

MSc, Information Technology — National Open University of Nigeria
2023 – 2025 | Thesis: Development of a Machine Learning Model for Detection of Cryptojacking

Postgraduate Diploma, Information Technology — National Open University of Nigeria
2023 | Project: Design and Implementation of a Web-Based AI Tool for Real-Time Trading in Financial Markets

Higher National Diploma (HND), Electrical/Electronic Engineering — Rivers State Polytechnic, Bori
2003 – 2005 | Lower Credit; Coursework: control systems, instrumentation, circuit design, microprocessors, power systems, electrical machines

Nigerian Certificate in Education (NCE), Electrical/Electronic Technology — Federal College of Education (Technical), Omoku
1998 – 2001 | Major subjects: Teaching Practice (Credit), Education (Merit), Technical Education Elect/Elect (Merit)

Senior School Certificate (SSCE) — West African Examinations Council (WAEC), Examination Centre: Port Harcourt
December 1998 | English Language (C5), Geography (C6), Mathematics (C5), Further Mathematics (P7), Physics (C6), Chemistry (C3), Agricultural Science (C5), Applied Electricity (P7) — 8 subjects recorded; Certificate No. NGSP 0758719

Primary School Leaving Certificate — Greater Tomorrow Primary School, Benin City

TEACHING EXPERIENCE

Assistant Instructor — Department of Electrical Engineering, Rivers State University, Nigeria | 2016

- Taught neural networks for a final-year Artificial Intelligence (AI) course
- Developed neural program codes in MATLAB/SIMULINK for classroom demonstrations and student laboratories

Instructor, Workshop on Embedded Systems — Department of Electrical/Electronic Engineering, Captain Elechi Amadi Polytechnic, Nigeria | 2012

- Taught microcontroller programming to first-year electrical engineering students
- Developed program codes, training manuals, and hardware systems for teaching embedded systems and microcomputer interfacing

Special Projects Manager (Teaching-Adjacent) — Digitronix, Choba, Rivers State | 2006 – 2007

- Supervised final-year capstone projects for Electrical Engineering students at the University of Port Harcourt, providing hands-on instruction in microcomputer interfacing, embedded C programming, PCB prototyping, and technical documentation

Secondary-Level Teaching

- Assistant Teacher, Government Girls Secondary School, Rumuokwuta, Rivers State (2000) — Physics, SS1
- Teacher, Chuks Comprehensive High College, Choba, Rivers State (2003 – 2004) — Physics, Mathematics, Chemistry (JS1–3, SS1–3); developed WAEC practical laboratory experiments
- Teacher, Success Comprehensive High School, Ozouba, Rivers State (2005) — Physics and Chemistry (SS1–3); developed WAEC practical laboratory experiments

PROFESSIONAL / INDUSTRIAL WORK EXPERIENCE

Chief Research Scientist and Executive Officer — SURE-GP Ltd., Port Harcourt, Rivers State | 2015 – Present

- Founded and directed SURE-GP AI Labs and the SURE-PAY Foundations Program
- Led industry-academia research partnerships across universities, polytechnics, and colleges in South-South Nigeria
- Mentored graduate researchers on thesis-aligned projects in machine learning, robotics, and power-system optimization

Chief Technical Officer (Contract) — Impromise LLC, South Orange, New Jersey, USA | 2019 – Present

- Research scientist in charge of the design of knowledge AI systems and consensus-mechanism algorithms
- Lead R&D in intelligent embedded systems and distributed control architectures

Electrical Engineer — J.C. Joematech Res. Ltd., Port Harcourt, Rivers State | 2008 – 2011

- Supply and installation of turbo-charger systems for oilfield wireline service gensets
- Supervised supply-chain operations and business processes

Special Projects Manager — Digitronix, Choba, Rivers State | 2006 – 2007

- Designed special-purpose embedded systems based on AVR-core RISC microprocessors
- Developed and supervised microcomputer interfacing projects for the University of Port Harcourt Electrical Engineering Department

RESEARCH EXPERIENCE

- Research Assistant (Postgraduate Level), Dept. of Computer Science, Rivers State University, 2022 – 2025 — Neural Networks for Smart Classrooms; Fingerprint Authentication using Deep Neural Networks (OTC)
- Research Student (Postgraduate Level), Dept. of Information Technology, NOUN, 2023 – 2025 — Machine Learning Methods for Blockchain Malware Detection
- Research Student (Postgraduate Level), Dept. of Information Technology, NOUN, 2020 – 2021 — Web-Based AI Tool for Real-Time Trading in Forex and Crypto Markets

- Research Assistant (Postgraduate Level), Dept. of Computer Science, Rivers State University, 2016 – 2019 — Smart Classrooms; MATLAB Toolbox for Cortical Learning Algorithms; Improved Activation Function for Feed-Forward Neural Networks
- Research Assistant (Postgraduate Level), Dept. of Electrical Engineering, University of Port Harcourt, 2014 – 2015 — Power Transformer Insulation Life Simulation Studies
- Research Assistant (Graduate Level), Dept. of Computer Engineering, Captain Elechi Amadi Polytechnic, 2012 – 2013 — Embedded Systems Design and Simulation

SELECTED PUBLICATIONS

Peer-Reviewed Journal Papers

1. Osegi, E. N., Anireh, V. I., & Mgbeafulike, J. I. (2024). NotFYCEX: A Simulation-Based Price Prediction and Notification System Using a Continuous Machine Learning Method. *Computer Science*, 9(1), 18–31.
2. Osegi, E. N., Jagun, Z. O., Chujor, C. C., Anireh, V. I., Wokoma, B. A., & Ojuka, O. (2023). An evolutionary programming technique for evaluating the effect of ambient conditions on the power output of open-cycle gas turbine plants. *Applied Energy*, 349, 121661.
3. Osegi, E. N., & Jumbo, E. F. (2021). Comparative analysis of credit card fraud detection in Simulated Annealing-trained Artificial Neural Network and Hierarchical Temporal Memory. *Machine Learning with Applications*, 6, 100080.
4. Osegi, E. N. (2021). Using the hierarchical temporal memory spatial pooler for short-term forecasting of electrical load time series. *Applied Computing and Informatics*, 17(2), 264–278.
5. Osegi, E. N., Wokoma, B. A., Idachaba, A. O., Odu, P. O., Taylor, O. E., Jagun, Z. O., et al. (2021). Dynamic load prediction using auditory machine intelligence for smart grid applications. *Journal of Information Science, Systems and Technology*, 5(3), 43–57.
6. Osegi, E. N., Anireh, V. I., & Taylor, O. E. (2020). A novel neural machine intelligence algorithm for temperature forecasting and conditioning for smart classroom applications. *Journal of Information Science, Systems and Technology*, 4(3), 19–31.
7. Osegi, E. N., & Anireh, V. I. (2020). AMI: An auditory machine intelligence algorithm for predicting sensory-like data. *Computer Science*, 5(2), 71–89.
8. Anireh, V. I. E., & Osegi, E. N. (2019). ABC-PLOSS: A software tool for path-loss minimisation in GSM telecom networks using artificial bee colony algorithm. *International Journal of Swarm Intelligence*, 4(1), 20–37.

Peer-Reviewed Conference Proceedings

9. Osegi, E. N., Taylor, O. E., Wokoma, B. A., & Idachaba, A. O. (2020). A smart grid technique for dynamic load prediction in Nigerian power distribution network. *ICSISCET 2019, Proceedings in Adaptation, Learning and Optimization*, Vol. 13. Springer, Cham.
10. Wokoma, B. A., Osegi, E. N., & Idachaba, A. O. (2019). Predicting voltage stability indices of the Nigerian 330kV 30-bus power network using an auditory machine intelligence technique. *2019 IEEE AFRICON*, Accra, Ghana.
11. Osegi, E. N., Anireh, V. I., & Onukwughu, C. G. (2018). pCWot-MOBILE: A collaborative web-based platform for real-time control in the smart space. *iSTEAMS SMART-MINDS Conference*, Yaba College of Technology, Lagos, 13(3), 237–250.
12. Osegi, E. N., & Wokoma, B. A. (2018). Day-ahead short-term load forecasting using the hierarchical temporal memory. *iSTEAMS SMART-MINDS Conference*, Yaba College of Technology, Lagos, 13(1), 121–134.
13. Idoniboyeobu, D. C., Wokoma, B. A., & Osegi, E. N. (2017). Fault location prediction on double-circuit transmission lines based on the hierarchical temporal memory. *IEEE 3rd Int. Conf. on Electro-Technology for National Development (NIGERCON)*, FUTO, Owerri.

Books and Book Chapters

14. Osegi, E. N., & Wokoma, B. A. (2026). A concurrent power distribution systems model for demand-supply scheduling using the Grey Wolf Optimizer. In S. Mirjalili (Ed.), *Grey Wolf Optimizer: A pack of solutions for your optimization problems* (Vol. 1, pp. 719–737). Morgan Kaufmann.
15. Nwaduwa, F. O. C., & Osegi, E. N. (2017). *Introduction to Modeling Using MATLAB and SIMULINK*. Kagri Global Publications, Ibadan, Nigeria.
16. Osegi, E. N. (2013). *An Introduction to Mathematical Modeling Using SIMULINK*. Lulu Publishers, USA.

Patent Application

Ilheakaram, N. E., Ilheakaram, C. K., & Osegi, E. N. (2019). Method and apparatus for architecture of a knowledge system for mathematization of knowledge representation and intelligent task processing. U.S. Patent Application Publication No. US20190022463A1.

CONFERENCE PRESENTATIONS & PROFESSIONAL DEVELOPMENT

- Presenter, "An Anomaly Detection Particle Swarm Optimizer (AD-PSO) Machine Learning System Model for Mitigating Cryptojacking," 2nd International Conference on Data-Driven Innovation and Applications (ICDIA), University of Nigeria, Nsukka (1–3 September 2026)
- Presenter, "Power Transmission Lines Fault Location Prediction Using Hierarchical Temporal Memory Technique," 14th International Conference and Exhibition on Power and Telecommunications (ICEPT), Nigerian Institution of Electrical and Electronics Engineers (NIEEE), Port Harcourt (8–12 October 2018)
- Participant, IEEE 3rd International Conference on Electro-Technology for National Development (NIGERCON), Federal University of Technology, Owerri (7–10 November 2017)
- Presenter, First National Conference on Entrepreneurship Innovation through Engineering Technology for National Development, School of Engineering Technology, Port Harcourt Polytechnic (17 July 2017)
- Participant, 6th International Conference Short Course on "Emerging Concepts in Toxicology and Risk Assessment," West African Society of Toxicology (WASOT) (9 August 2017)
- Participant, 11th SMART-MINDS / iSTEAMS International Conference on Multidisciplinary Innovations for Infrastructure, National Development & Smart-Cities, Yaba College of Technology (26–28 June 2018)
- Certificate of Professional Development in Electronic Circuit Design & Construction Skills, Student Engineers Professional Development Activity (SEPDA), Nigerian Society of Engineers, Port Harcourt Branch (25 November – 1 December 2004)
- Certificate, SWIFT First Step Computer Literacy Programme, NIIT, Port Harcourt (3 December 2004)

HONOURS, AWARDS & ACADEMIC COMMUNITY SERVICE

- Certificate of Outstanding Contribution in Reviewing — Electric Power Systems Research, Elsevier (2017)
- Certificate of Outstanding Contribution in Reviewing — Pattern Recognition Letters, Elsevier (2017)
- Federal College of Education (Technical), Omoku — Student Union Government (SUG) Scholarship (1999)
- Technical Reviewer, Elsevier Ltd. (2016–2017): Electric Power Systems Research, Pattern Recognition Letters, Applied Soft Computing
- Conference Assistant, First National Conference, School of Engineering Technology, Captain Elechi Amadi Polytechnic (2017)

TECHNICAL SKILLS

- Mechatronics & Embedded Systems: circuit design, PROTEUS simulation, microcontroller programming (AVR, Arduino), PCB prototyping, sensor/actuator integration, robotics (ROS 2)
- AI / ML & Intelligent Control: neural networks (feed-forward, HTM, deep learning), evolutionary/swarm optimization, time-series forecasting, anomaly detection, multi-agent systems
- Modeling & Simulation: MATLAB/SIMULINK (advanced), HOMER Pro, ArgoUML, SPSS, Microsoft Excel
- Programming: Python, C/C++, Java, JavaScript, Arduino C++, AVR Assembler; PHP/MySQL, MongoDB
- Domains: power-system optimization, embedded intelligence, cybersecurity (malware/cryptojacking detection), energy management systems, financial market prediction

REFEREES

Prof. Vincent Ike Emeka Anireh — Department of Computer Science, Faculty of Sciences, Rivers State University | +234-803-322-9172 | anireh.ike@ust.edu.ng

Prof. Bartholomew Ogboke Eke — Department of Computer Science, Faculty of Computing, University of Port Harcourt | +234-803-704-9586 | Bartholomew.eke@uniport.edu.ng

Dr. Taylor Onate Egerton — Department of Computer Science, Faculty of Sciences, Rivers State University | +234-803-444-8978 | taylor.onate@ust.edu.ng

I hereby declare that the information provided above is true and correct to the best of my knowledge.