Mayowa Samuel Olokun

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Google Scholar • ResearchGate • Rotherham, UK

RESEARCH INTEREST

I am interested in applying artificial intelligence and machine learning to develop intelligent systems that solve real-world problems. My background in automation, control and robotics engineering motivates me to build solutions that are technically rigorous, human-centred, and practically meaningful. I am particularly drawn to deep learning, computer vision, and sensor-based approaches for real-world applications, including smart automation, activity recognition systems, and intelligent decision-support tools. My focus has extended to the trustworthiness of these systems: explainable AI, the reliability of model explanations under distribution shift, and uncertainty-aware machine learning, with renewable energy forecasting as a key application domain. I also value working directly with end users and evaluating systems in real settings, to ensure the technologies I develop are robust, reliable, and genuinely useful in everyday contexts.

EDUCATION

MSc Automation, Control and Robotics — Distinction Sep 2023 – Oct 2024
Sheffield Hallam University, Sheffield, UK

- Dissertation: Performance Comparison and Evaluation of Deep Learning Artificial Neural Networks for Iris Flower Image Classification
- Key modules: Advanced Control Systems, Robotics, Machine Vision, Artificial Intelligence, Industrial Automation.

PGD Computer Engineering Aug 2015 – Feb 2018
Ladoke Akintola University of Technology (LAUTECH), Ogbomoso, Nigeria

HND Computer Engineering Aug 2010 – Oct 2012
Federal Polytechnic Ede, Osun State, Nigeria

ND Computer Engineering Sep 2007 – Oct 2009
Interlink Polytechnic, Ijebu Jesa, Osun State, Nigeria

RESEARCH FUNDING

Institutional Research Grant — TETFund Mar 2022 – Jun 2022
Nigerian Tertiary Education Trust Fund (TETFund) | Award: 1,750,000 NGN | Role: Researcher

- Project: Development of Deep Neural Network Model for the Prediction of Road Crashes in Real Time
- Developed a GoogleNet CNN to classify traffic conditions on the Ondo-Akure highway, Nigeria; achieved 0.98 accuracy for congested traffic, 0.94 for crash prediction, and 0.96 correlation coefficient overall

Institutional Research Grant — TETFund Sep 2021 – Dec 2021
Nigerian Tertiary Education Trust Fund (TETFund) | Award: 1,750,000 NGN | Role: Researcher

- Project: Development of an Automatic Solar-driven Hand Sanitizing System (AHSS) using Proximity Sensors
- Designed and conducted a user evaluation with students to assess system usability and reliability in a real-world setting; the contactless system used IR proximity sensors and solar-powered DC pumps to dispense sanitiser, achieving 100% detection accuracy with zero false positives

AWARDS & RECOGNITION

Letter of Appreciation — Institutional Technology Deployment November 2018
The Federal Polytechnic, Ile-Oluji, Ondo State, Nigeria — Office of the Registrar

- Formally recognised by institution management for successfully proposing and leading the deployment of Google Suite for Education across the polytechnic, an implementation valued at over ₦2,000,000 NGN
- Deployment provisioned 2,000 student and staff accounts, enabling institution-wide collaboration on coursework, instant feedback delivery, and cross-country academic engagement with specific recognition for application to Assistive Learning
- Commended for technical leadership, initiative, and the significant institutional advancement the project represented

Letter of Commendation — Institutional Service Excellence April 2017

The Federal Polytechnic, Ile-Oluji, Ondo State, Nigeria — Office of the Registrar

- Commended by the Rector and senior management for outstanding performance in a recruitment screening exercise formally described as well planned and brilliantly executed
- Recognised for cooperation, devotion of time, enthusiasm, and selfless service to the institution

PROFESSIONAL EXPERIENCE

Data Scientist Feb 2025 – June 2026

Amdari Limited, UK

- Conducted statistical analysis and A/B testing for marketing campaigns, improving conversion rates by 18% and reducing acquisition costs by 12% across global clients
- Delivered end-to-end machine learning pipelines from preprocessing to deployment, accelerating delivery timelines by 30% while ensuring scalable, production-ready solutions across multiple industries
- Designed predictive models using Python and SQL for banking, retail, and tech clients, improving forecasting accuracy by 35% and enabling smarter data-driven decisions
- Led cross-functional client workshops to gather requirements and engage stakeholders, translating complex business problems into data solutions that delivered scalable implementations and measurable operational savings
- Built customer segmentation and churn prediction models, improving client retention strategies by 15–25% and enabling personalised engagement with measurable growth in customer lifetime value

Data Analyst (Remote) Oct 2023 – Dec 2024

Vista Technologies, UK — Concurrent with MSc studies at Sheffield Hallam University

- Led end-to-end data workflows using Excel, SQL, and Python, improving data quality and analytical reliability across client projects
- Built and maintained machine learning models for forecasting, pricing, and customer engagement, boosting predictive accuracy by approximately 20%
- Developed interactive dashboards in Power BI, Tableau, and Excel, enabling real-time insights and faster decision-making for stakeholders
- Mentored junior analysts through code reviews, coaching, and knowledge-sharing sessions, strengthening overall team capability
- Partnered with cross-functional teams to convert business requirements into actionable, data-driven solutions

Senior Technologist Oct 2015 – Aug 2023

The Federal Polytechnic Ile Oluji, Ondo State, Nigeria — Department of Computer Engineering

- Designed, planned, and delivered undergraduate lectures and laboratory sessions in Python programming, SQL, Java, data structures, embedded systems, and web development, consistently supporting student attainment and engagement
- Supervised and assessed student final-year projects and practical laboratory work, providing academic guidance on research methodology, experimental design, and technical report writing
- Led applied AI and machine learning research initiatives, employing supervised and unsupervised learning models and contributing findings to multiple peer-reviewed journal publications
- Secured and managed two competitive TETFund institutional research grants totalling 3,500,000 NGN, overseeing project delivery, data collection, analysis, and dissemination of results
- Developed and maintained technical laboratory infrastructure for computer engineering practicals, ensuring equipment functionality, safety compliance, and alignment with curriculum requirements
- Built and deployed data pipelines, analytical dashboards, and ML-integrated automation workflows, applying Python (Pandas, NumPy), SQL, Power BI, and Tableau to institutional and research data

Junior Data Analyst & Trainer Jul 2013 – Sep 2015

Classic Systems Infotech, Nigeria

- Executed end-to-end ETL workflows to extract, transform, and load data from diverse internal and external sources, ensuring accurate and timely analysis
- Wrote and optimised SQL queries for data extraction, cleansing, and reporting, improving data accessibility and analysis efficiency
- Assisted senior analysts in building interactive dashboards using Tableau and Power BI, generating insights on customer behaviour and market trends
- Led internal training sessions for colleagues and clients on data tools, SQL querying, and dashboard interpretation, strengthening organisational data literacy and analytical capability

- Produced structured training materials and documentation to support knowledge transfer and onboarding of new team members
- Delivered analytical insights that supported enhanced resource allocation and workflow optimisation, contributing to a 10% increase in operational efficiency

TECHNICAL SKILLS

Programming & Machine Learning: Python, MATLAB, TensorFlow, PyTorch

Data & Analytics: SQL, Power BI, Data Visualisation, Statistical Analysis

Hardware & Embedded Systems: Arduino, ESP-32, IoT Systems, Sensor Integration, Microcontrollers

Deep Learning: CNNs, GoogleNet, Transfer Learning, Image Classification, Neural Network Evaluation

Human-Centred Design & HCI: User-Centred Design, Usability Evaluation, Requirements Gathering, Stakeholder Engagement, Accessible Interface Design

Research & Development Tools: Google Scholar, ResearchGate, GitHub, LaTeX

PUBLICATIONS

1. **Olokun, M. S.** (2024). *Performance comparison and evaluation of deep learning artificial neural networks for iris flower image classification* [Master's thesis, Sheffield Hallam University]. ResearchGate. [THESIS]
2. Babalola, T. E., Babalola, A. D., & **Olokun, M. S.** (2022). Development of an ESP-32 microcontroller based weather reporting device. *Journal of Engineering Research and Reports, 22*(11), 27–38. [PAPER]
3. **Olokun, M. S.***, Ipindola, O. O., Oyediji, F. T., & Falana, J. N. (2022). Development of deep neural network model for the prediction of road crashes in real time. *Journal of Engineering Research and Reports, 22*(10), 25–33. [PAPER]
4. Iwayemi, A., **Olokun, M. S.***, & Alalade, A. O. (2022). Development of IoT based digital display board for students' lectures update. *Journal of Engineering Research and Reports, 22*(4), 1–9. [PAPER]
5. Iwayemi, A., **Olokun, M. S.**, & Adegboye, P. F. (2022). Development of an Internet of Things based irrigation system for an improved farming technology. *International Journal of Advances in Engineering and Management, 4*(2), 681–691. [PAPER]
6. Adegoke, B. O., **Olokun, M. S.**, & Agboola, S. (2021). Development of an automatic solar-driven hand sanitizing system (AHSS) using proximity sensors. *Current Journal of Applied Science and Technology, 40*(40), 7–16. [PAPER]
7. Babalola, T. E., Babalola, A. D., & **Olokun, M. S.** (2021). Development of IoT device for sensing weather and environmental pollutants. *Journal of Engineering Research and Reports, 21*(6), 29–40. [PAPER]
8. Babalola, A. D., & **Olokun, M. S.** (2021). Design and construction of smart vehicle security system using GPS and spy cam. *Journal of Engineering Research and Reports, 21*(2), 31–47. [PAPER]
9. Iwayemi, A., **Olokun, M. S.**, & Bello, B. O. (2021). An integrated numerical computation system in engineering using rapid application incremental development model. In *Proceedings of the 2021 SEET Annual Conference* (pp. 625–641). Federal University of Technology, Akure. [PAPER]
10. Babalola, A. D., & **Olokun, M. S.** (2021). Design and construction of microcontroller based vehicle accident detection and reporting system. *International Journal of Engineering and Information Systems, 5*(10), 13–24. [PAPER]
11. Iwayemi, A., **Olokun, M. S.**, & Ayodele, K. D. (2021). Automatic gas leakage detection and control system against kitchen accidents. *International Journal of Advanced Research in Science, Engineering and Technology, 8*(9), 18271–18278. [PAPER]
12. Oyediji, F. T., **Olokun, M. S.**, & Yakubu, A. J. (2021). Construction of digital alcohol sensing device for motorists. *International Journal of Advanced Research in Science, Engineering and Technology, 8*(8), 18026 –18039. [PAPER]
13. **Olokun, M. S.** (2017). Design and implementation of photo-induced heart beat monitoring system. *British Journal of Mathematics & Computer Science, 20*(4), 1–14. [PAPER]

**Corresponding author*

CONFERENCES & PRESENTATIONS

Paper Presenter — ICESET 2022

2022

International Conference of Engineering, Science, and Environment Technology (ICESET 2022)

Federal Polytechnic, Ile-Oluji, Ondo State, Nigeria

Paper: *Object Modeling and Recognition for Service Robots*

- Presented research on developing a vision system enabling autonomous service robots to identify and locate common household objects, directly motivated by the potential of service robots to assist elderly and disabled people

- Object modelling implemented using a V4R RGBD camera setup; recognition system integrated into ROS (Robot Operating System) with an accessible, block-based (Blockly) interface designed to enable non-expert users to configure assistive robot behaviour without programming knowledge
- Research demonstrated practical application of computer vision and autonomous systems in assistive robotics contexts directly informing current research interests in AI-powered assistive and rehabilitation systems

Co-Author — SEET 2021 Annual Conference 2021

School of Engineering and Engineering Technology (SEET) Annual Conference, Federal University of Technology, Akure, Ondo State, Nigeria (IARASETA, 6–8 October 2021)

Paper: *Towards an Integrated Numerical Computation System in Engineering Using Rapid Application Incremental Development Model*

- Co-authored conference paper (Iwayemi A., Olokun M.S., Bello B.) proposing an integrated numerical computation system for engineering applications, developed using a Rapid Application Incremental Development software engineering model

PROFESSIONAL MEMBERSHIP

Member — Institution of Electrical Electronics Engineering (IEEE)

Membership No: 98012107 | ieee.org

Member — Institution of Engineering and Technology (IET)

Membership No: 1101195165 | iet.org

Registered Engineer — Council for the Regulation of Engineering in Nigeria (COREN)

Licence No: R63246 | coren.gov.ng

COMMUNITY SERVICE

Member — Ijebu Jesa Community IT Committee Jan 2020 – Present

- Designed and managed community websites; oversaw IT resource centre operations; provided expert guidance on IT procurement and infrastructure improvements

VOLUNTEERING

Mentor May 2026 – Present

Local Village Network (LVN), UK — Grassroots charity supporting young people since 2015

- Providing one-to-one mentoring to young people, helping them build confidence, identify career pathways, and develop professional networks
- Supporting LVN's Amplify Me programme, delivering school-based mentoring to underprivileged young people to improve social mobility and employment prospects
- Sharing professional experience in data science, engineering, and AI to open doors and demystify the world of work for young people who lack access to professional role models

STEM Ambassador Mar 2026 – Present

STEM Learning UK (National Programme funded by UK Research and Innovation)

- Volunteering in schools, colleges, and community groups across the UK to bring real-world examples of STEM careers and engineering to young people
- Delivering workshops and career talks illustrating how AI, robotics, and data science apply in the real world, helping to inspire the next generation into STEM pathways
- Contributing as a role model from an international and disability background, challenging stereotypes and broadening students' awareness of who works in STEM

IT Support Volunteer Jan 2025 – Present

Salvation Army, Goldthorpe, South Yorkshire, UK

- Provided voluntary IT support including computer setup, system configuration, hardware and software troubleshooting, and error resolution to ensure reliable operation of the organisation's digital equipment
- Diagnosed and resolved technical faults to support the charity's day-to-day operations

REFERENCES

Available upon request.