

ONASOGA, OLUKAYODE AYODELE, PhD

Address: 57A, Jalan Teja, 8/3 Teman Teja, Changlun, Kedah, Malaysia
Telephone: +60149690938
Email: konasoga@yahoo.com

Professional Summary

A dynamic and results-driven academic, researcher and educator with progressive experience and expertise in Artificial Intelligence, Deep Learning, Machine Learning, and Data Science. Demonstrated expertise in curriculum design, interdisciplinary research, and student-centered pedagogy across undergraduate and postgraduate levels. I boast a strong record of peer-reviewed publications, successful grant acquisition, and supervision of MSc and PhD students, which has led to impactful academic and industry outcomes. Adept at integrating innovative AI techniques in healthcare, finance, education, and policy domains. As a strategic collaborator in international research networks and partnerships with industry and government agencies, I am passionate about fostering inclusive learning environments and contributing to institutional growth through teaching, research, and academic service.

Expertise

- Deep Learning
- Smart Aquaculture Systems
- Multi-modal Sentiment Analysis
- AI Explainability & Ethics
- Smart Technology
- Fuzzy Inference Systems
- Data Science
- Predictive Modeling

Key Competences

- Research & Publications
- Artificial Intelligence & Deep Learning
- Data Science & Machine Learning
- Problem Solving & Critical Thinking
- Academic Writing & Conference Presentations
- Predictive Analytics
- Teaching, Learning & Curriculum Development
- Academic Leadership, Institutional Service & Team Collaboration
- Supervision & Mentorship (Postgraduate & Undergraduate)
- Interdisciplinary & Industry Collaboration
- Program Accreditation & Quality Assurance
- Grant Writing & Research Funding

Academic & Research Experience

Research Associate : Data Science Research (DSRL), School of Computing (SOC), College of Arts & Sciences (CAS), Universiti Utara Malaysia (UUM).

Research Collaboration with School of Technology Management and Logistics, UUM College of Business and Pejabat Perikanan Negeri Kedah.

Responsibilities / Accomplishments:

- Lead innovative research driven by demand through the Jabatan Perikanan Malaysia grant/funding under the project title “Smart Aquaculture through Machine Learning and IoT”.
- Lead the development and implementation of deep learning models for aquatic health diagnostics
- Provided technical support for sensor integration and IoT system architecture design
- Contributed to data analysis, report preparation, and academic dissemination
- Mentored student researchers associated with the project
- Participanted in stakeholders meetings and presneting findings to our partners.

Date Analyst - Data Science Research (DSRL), UUM College of Arts & Sciences

Extensive academic and research background in AI, Deep Learning and Data Science, with a strong record of curriculum design, interdisciplinary research, postgraduate supervision, funded projects, and high-impact scholarly publications.

Responsibilities / Accomplishments:

- **Curriculum Development & Innovation:** Contributed to undergraduate and postgraduate program enhancement, ensuring alignment with industry standards.
- **Teaching & Learning:** Delivered courses in Machine Learning, Deep Learning, and AI Ethics, achieving high student satisfaction ratings.
- **Postgraduate Project Evaluation:** Successfully evaluated and supervised MSc students, leading to impactful publications and industry placements.
- **Interdisciplinary Research & Grant Acquisition:** Assisted in writing grant proposals to secure funding and align research objectives with grant requirements.
- **Academic Leadership:** Served on departmental and faculty committees, contributing to governance, accreditation, and student mentorship programs.
- **Research Design & Problem Definition:** Conducted research in machine learning, deep learning, and AI-driven data analytics.
- **Model Development and Algorithm Design:** Developed machine learning models for classification, clustering, and predictive analytics.
- **Academic Writing & Publication:** Published high-impact research papers in peer-reviewed journals.
- **Mentorship:** Provided mentorship and guidance to junior researchers and postgraduate students.

Paper Reviewer & Conference Organizer / Contributor

Actively engaged in academic peer review and conference organization, contributing to the advancement of research in Artificial Intelligence, Data Science, and AI for Finance and Accounting. Served as a reviewer for international conferences, ensuring scholarly rigor and quality. Participated as a program committee member and session chair for various AI and technology symposia. Recognized for insightful and constructive feedback that strengthens research output. These roles demonstrate a strong commitment to academic service, knowledge dissemination, and staying at the forefront of emerging scientific trends.

Accomplishments:

- The 1st International Conference on Emerging Systems and Advanced Technology (ICoESAT 2025), 14 & 15 April 2025, Hybrid . ICoESAT 2025 Hosted by Gulf Colleges Saudi Arabia.
 - Digital Zone: Jurnal Teknologi Informasi dan Komunikasi, SINTA 3, Indonesia.
 - The 2nd IEEE International Conference on Fundamental Applied Sciences and Technology (ICoFAST 2024).
2 - 3 July, 2024, Mukalla, Hadhramout, Yemen.
 - The 5th ICAN Malaysia International Conference on Accounting and Finance (ICAF-IMDS), Stagflation and Digital Transformation: What do they matter for Business Sustainability?
1 - 4 May 2023, The Everly Putrajaya, Malaysia.
 - The 4th ICAN Malaysia International Conference on Accounting and Finance (ICAF-IMDS) Building Economic Resilience: Navigating Turbulent Times through Digital Transformation.
21 - 24 March 2022, Adya Hotel, Kuah, Langkawi Island, Malaysia.
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- The 3rd ICAN Malaysia International Conference on Accounting and Finance (ICAF-IMDS) Economy and Business Resilience in the Pandemic Era: A Drive for Digital Transformation. 24 - 25 March 2021, Kedah, Malaysia (Virtual Conference)

Course Taught - Postgraduate (Masters and PhD)

STIQ6014 Research Methodology in Computing Course

Topic: Using Mendeley to Make Systematic Literature Reviews Easier and Faster
Postgraduate (Masters and PhD) - Computer Science / Information Technology
School of Computing (SOC), Universiti Utara Malaysia (UUM) ,
Kedah, Malaysia

STIQ6014 Research Methodology in Computing Course

Topic: Exploring the Adoption and Usage Patterns of Mendeley Reference Manager
Postgraduate - Information Technology
School of Computing (SOC), Universiti Utara Malaysia (UUM) ,
Kedah, Malaysia

STIN5014 Artificial Intelligence Course

Topic: Deep Dive into CNN Architecture and Machine Learning: Processes. Trends and Practical Coding
Postgraduate
Master's and Undergraduate - Information Technology
School of Computing (SOC), Universiti Utara Malaysia (UUM) ,
Kedah, Malaysia

Seminar Talk Series

Topic: Deep Learning and its Application
School of Computing (SOC), Universiti Utara Malaysia (UUM),
Kedah, Malaysia

Masters Project Assessor - Academic Session 2024/2025 & 2025/2026

Topic: Project in Computing
MSc Information Technology, School of Computing (SOC), Universiti Utara Malaysia (UUM),
Kedah, Malaysia

Research Areas & Projects

Multimodal Sentiment Analysis (MSA) using integrated Fuzzy layered Convolutional Neural Network

Accomplishments:

- Developed a TensorFlow-based Fuzzy layered CNN model for MSA, attaining an accuracy rate greater than 90% and a reduction of trainable parameters by 30% with optimized batch processing using the profound sentiment/emotion datasets.
 - Enhanced interpretability of the model's predictions by using fuzzy reasoning to explain decisions, particularly in scenarios where sentiment is subjective and complex.
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Food Security Analysis Using Convolutional Neural Networks (CNN) for Text Classification

Accomplishments:

- Developed a text classification model using Convolutional Neural Networks (CNN) to analyze and classify text data related to food security
- Enhanced food security insights by analyzing patterns and correlations in the classified data, aiding in decision-making for policy development and emergency response

Image Classification using Convolutional Neural Networks:

Accomplishments:

- Developed a TensorFlow-based CNN model, attaining an 88% accuracy rate in image classification and reducing training time by 15% with optimized batch processing.
- Leveraged a pre-trained LeNet-5 network, achieving image recognition with precision (92%), recall (91%), and an F1-score (93%), assessed via a confusion matrix.

Education

Universiti Utara Malaysia (UUM), Sintok, Kedah, Malaysia.

Doctor of Philosophy (PhD) Computer Science

Covenant University, Ota, Ogun State, Nigeria.

Masters Engineering, Information and Communication Engineering

Olabisi Onabanjo University College of Engineering and Environmental Studies. Ibojun, Ogun State, Nigeria.

Bachelor of Science, Electrical/ Electronics Engineering BSc (Hons) Second Class Upper Division

Petroleum Training Institute, Warri, Delta State, Nigeria

National Diploma, Electrical Electronics Engineering Technology

Certifications

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| • Deep Learning with Python | • Python for Data Analysis |
| • Data Visualization in Tableau | • Certified Scrum Master® |
| • Data Visualization with Power BI | • Big Data and AI |

Professional Membership

- The Association for the Advancement of Artificial Intelligence (AAAI)
- International Association of Engineers (IAENG)
- The Council for the Regulation of Engineering in Nigeria (COREN).
- The Nigerian Society of Engineers (NSE)
- Microsoft Internet Security and Acceleration Server 2006, Configuring MICROSOFT
- Executive Member, ICAN Malaysia District Society

Publications

Onasoga, O. A., Yusoff, N. & Harun, N. H. (2025). Fuzzy-inference-based Multi-modal Processing for Feature and Decision Fusion using 2D CNN, Choquet Integral, and Fuzzy Measure. **Submitted for publication.**

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- Onasoga, O. A., Harun, N. H. ., & Yusoff, N. (2024). Fuzzy Convolution Neural Network for Breast Cancer Classification. **Submitted for publication.**
 - Onasoga, O. A., Harun, N. H. ., & Yusoff, N. (2023). Fuzzy Layered Convolution Neural Network for Feature Level Fusion Based On Multimodal Sentiment Classification. *Emerging Advances in Integrated Technology*, 3(2), 65–78. Retrieved from <https://publisher.uthm.edu.my/ojs/index.php/email/article/view/13217>.
 - Onasoga, O. A., Yusof, N., & Harun, N. H. (2021). Audio Classification - Feature Dimensional Analysis. *The Importance of New Technologies and Entrepreneurship in Business Development: In The Context of Economic Diversity in Developing Countries*, 775–788. https://doi.org/10.1007/978-3-030-69221-6_59.
 - Onasoga O. A., Nooraini Y., (2019). Explainable Deep Learning: Methods and Challenges. *Journal of Advanced Research in Dynamical and Control Systems*, Special Issue 11(8), 1186-1285.
 - Ndujiuba, C. U., John, S. N., & Onasoga, K. (2014). Optic Fibericity-The New Era Lighting. *International Journal of Energy Engineering*, Scientific & Academic Publishing, 4(4), 69-74.
 - Frank, I., Ike, D., Jimi, A., & Kayode, O. (2013). Multiple-Access Technology of Choice In 3GPP LTE. *International Journal of Computers & Technology*, 6(2), 321–328. <https://doi.org/10.24297/ijct.v6i2.3497>.
 - Anthony, A., Onasoga, K., Ike, D., & Ajayi, O. (2013). Web Archiving: Techniques, Challenges, and Solutions. *International Journal of Management & Information Technology*, 5(3), 598–603. <https://doi.org/10.24297/ijmit.v5i3.760>
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References

References available on request
