

# OLUWATAYOMI RERELOLUWA ADEGBOYE (Ph.D)

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## BIO DATA

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- **Place of Birth:** Modakeke, Nigeria
- **Date of Birth:** 20/12/93
- **Sex:** Male

## RESEARCH IDENTIFIERS

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- **Web of Science Researcher ID:** KAU-5804-2024
- **Scopus ID:** 57218603483
- **ORCID:** 0000-0001-9945-8764
- **Google Scholar:** <https://scholar.google.com/citations?user=Pws7zQwAAAAJ&hl=en&oi=ao>

## EDUCATION

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- **Ph.D. Computer Engineering** – European University of Lefke, Lefke, TRNC **2023**
- **M.Sc. Computer Engineering** – European University of Lefke, Lefke, TRNC **2019**
- **B.Sc. Electrical and Electronics Engineering** – Osun State University, Osogbo, Nigeria **2015**

## RESEARCH INTERESTS

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- My primary research interests are in the areas of Machine learning, Metaheuristic Algorithms, Artificial Intelligence, Swarm Intelligence, Data Analysis, and Big Data.
- **Relevant Coursework Taken:** Advanced Artificial Intelligence, Advance Database Management Systems, Machine Learning, Evolutionary Computation, Artificial Neural Networks, Pattern Recognition, Information Theory, System Programming, Research Methods and Publication Ethics, Network Modelling and Simulation.

## SKILLS HIGHLIGHT

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- Expansive knowledge of complex teaching resources, reference materials, and subject delivery, with the ability to identify and select materials to ensure comprehensive learning development.
- Core strength in facilitating laboratory sessions for various programming courses; able to communicate clear objectives on topics and impact knowledge in the most understandable manner.
- Technical Skills: Python, MySQL, C, C++, Oracle Database Management System, Tesseract Open Source OCR Engine, Scikit-Learn, Tensorflow, Keras, Numpy and Pandas.

## PROFESSIONAL EXPERIENCE

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- **Assistant Professor** – University of Mediterranean Karpasia, Lefkosa **Sept, 2023 – To Date**
- **ICT Manager** – University of Mediterranean Karpasia, Lefkosa **Sept, 2023 – To Date**
- **Research Assistant/Teaching Assistant** – European University of Lefke **Nov, 2019 – Jul 2023**
- **Physics Teacher** – Girls Secondary School, Awka, Nigeria **Oct. 2015 – Sept. 2016**
- **Transmission Yard Inspector** – Osogbo Transmission Station, Nigeria **Feb 2013 – Aug. 2013**

## COURSES TAUGHT AT UNDERGRADUATE LEVEL

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- Introduction to Computer (COMP 101)
- Management Information System (MGMT 401)
- Project Management (MGMT 406)
- Computer Applications (COMP 102)
- Web Design (Comp 302)
- E-Commerce (Comp 202)

## ACADEMIC EXPERIENCE

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- Reviewer: Energy & Environment (Sage Journals, Q2, Impact Factor 4.2)
- Reviewer: Information Sciences (Elsevier, Q1, Impact Factor 9.0)
- Reviewer: Financial Innovation (Springer, Q1, Impact Factor 7.59)
- Reviewer: Heliyon (Elsevier, Q1, Impact Factor 4.0)

- Reviewer: Connection Science (Taylor & Francis, Q2, Impact Factor 5.2)
- Reviewer: Cluster Computing (Springer, Q2, Impact Factor 4.4)
- Reviewer: Symmetry (MDPI, Q2, Impact Factor 2.2)
- Reviewer: PeerJ Computer Science (PeerJ, Q1, Impact Factor 3.8)
- Reviewer: Archives of Computational Methods in Engineering (Springer, Q1, Impact Factor 9.7)
- Reviewer: Alexandria Engineering Journal (Elsevier, Q1, Impact Factor 6.2)
- Reviewer: Knowledge and Information Systems (Springer, Q1, Impact Factor 2.5)
- Reviewer: Artificial Intelligence Review (Springer, Q1, Impact Factor 10.7)
- Reviewer: Evolutionary Intelligence (Springer, Q2, Impact Factor 2.3)
- Reviewer: Applied Intelligence (Springer, Q2, Impact Factor 3.4)
- Reviewer: Scientific Reports (Springer, Q1, Impact Factor 3.8)
- Reviewer: International Journal of Computational Intelligence Systems (Springer, Q2, Impact Factor 2.5)

## EDITORIAL EXPERIENCE

- **EDITORIAL REVIEW BOARD MEMBER**, Journal of Algorithms & Computational Technology **April 2026**

## ACADEMIC AWARD

- **MOST SCIE/SSCI/SCI**, University of Mediterranean Karpasia **Aug 2024**

## PROFESSIONAL TRAINING/DEVELOPMENT

- **Human Resource Management Associate**, MacNel Consult Ltd **Sept. 2016**

## ARTICLES PUBLISHED IN SCIENCE CITATION INDEX EXPANDED (SCIE) JOURNALS

1. **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda, Huseyin Kusetogullari (2026). "Red-Billed Blue Magpie Optimization Algorithm-Based Aquila Optimizer: Numerical Optimization, Engineering Problem, and Cybersecurity Intrusion Prediction". Symmetry. <https://doi.org/10.3390/sym18030503>. (Q2, Impact Factor 2.2)
2. Noreddin Nsir, Ahmad Bassam Alzubi, **Oluwatayomi Rereloluwa Adegboye** (2025). "Enhancing Sustainable Supply Chain Performance Prediction Using an Augmented Algorithm-Optimized XGBOOST in Industry 4.0 Contexts". Sustainability. <https://doi.org/10.3390/su172210344>. (Q1, Impact Factor 3.3)
3. Ibrahim Alrmah, Ahmad Alzubi, **Oluwatayomi Rereloluwa Adegboye** (2025). "AI-Driven Prediction of Ecological Footprint Using an Optimized Extreme Learning Machine Framework". Sustainability. <https://doi.org/10.3390/su172210319>. (Q1, Impact Factor 3.3)
4. Mohammed Husayn, **Oluwatayomi Rereloluwa Adegboye**, Ahmad Alzubi (2025). "GWO-Optimized Ensemble Learning for Interpretable and Accurate Prediction of Student Academic Performance in Smart Learning Environments". Applied Sciences. <https://doi.org/10.3390/app152212163>. (Q2, Impact Factor 2.5).
5. Mohamed Sasi, **Oluwatayomi Rereloluwa Adegboye**, Ahmad Alzubi (2025). "Explainable and Optimized Random Forest for Anomaly Detection in IoT Networks Using the RIME Metaheuristic". Electronics. <https://doi.org/10.3390/electronics14224465>. (Q2, Impact Factor 2.6).
6. Abdalhmid Abukader, Ahmad Alzubi, **Oluwatayomi Rereloluwa Adegboye** (2025). "Intelligent System for Student Performance Prediction: An Educational Data Mining Approach Using Metaheuristic-Optimized LightGBM with SHAP-Based Learning Analytics". Applied Sciences. <https://doi.org/10.3390/app152010875>. (Q2, Impact Factor 2.5)
7. Aymen Ramadan Mohamed Alahwel Basha, Opeoluwa Seun Ojekemi, Tolga Oz, **Oluwatayomi Adegboye** (2025). "Plsco: An optimization-driven approach for enhancing predictive maintenance accuracy in intelligent manufacturing". Processes. <https://doi.org/10.3390/pr13092707>. (Q2, Impact Factor 2.8)
8. Mahmoud Almsallti, Ahmad Bassam Alzubi, **Oluwatayomi Rereloluwa Adegboye** (2025). "Hybrid Metaheuristic Optimized Extreme Learning Machine for Sustainability Focused CO2 Emission Prediction Using Globalization-Driven Indicators". Sustainability. <https://doi.org/10.3390/su17156783>. (Q1, Impact Factor 3.3)
9. Flavio Odoi-Yorke, Ephraim Bonah Agyekum, **Oluwatayomi Rereloluwa Adegboye**, Charles KK Sekyere (2025). "Exploring the potential of solar photovoltaic and wind-based green hydrogen projects in ECOWAS region: Production, cost, and environmental maps". Energy Exploration & Exploitation. <https://doi.org/10.1177/01445987251355300>. (Q2, Impact Factor 2.2)

10. **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda, Abosede Omowumi Tibetan, Ephraim Bonah Agyekum (2025). "Enhanced global optimization using quadratically interpolated hybrid pathfinder algorithm". Cluster Computing. <https://doi.org/10.1007/s10586-024-04991-6>. (Q2, Impact Factor 3.6)
11. Yanhua Zhang, **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda, Ephraim Bonah Agyekum, Pankaj Kumar (2025). "Dynamic gold rush optimizer: fusing worker adaptation and salp navigation mechanism for enhanced search". Scientific Reports. <https://doi.org/10.1038/s41598-025-00076-5>. (Q1, Impact Factor 3.8)
12. Ephraim Bonah Agyekum, Flavio Odoi-Yorke, Agnes Abeley Abbey, **Oluwatayomi Rereloluwa Adegboye**, Farhan Lafta Rashid (2025). "Techno-economic, social and environmental analysis of different photovoltaic cell technologies under tropical weather conditions". International Journal of Thermofluids. <https://doi.org/10.1016/j.ijft.2025.10116>. (Q1).
13. **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda, Ghanshyam G Tejani, Aseel Smerat, Pankaj Kumar, Ephraim Bonah Agyekum (2025). "Salp Navigation and Competitive based Parrot Optimizer (SNCP0) for efficient extreme learning machine training and global numerical optimization". Scientific Reports. <https://doi.org/10.1038/s41598-025-97661-5>. (Q1, Impact Factor 3.8)
14. **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda (2025). "Improved exponential distribution optimizer: enhancing global numerical optimization problem solving and optimizing machine learning parameters". Cluster Computing. <https://doi.org/10.1007/s10586-024-04753-4>. (Q2, Impact Factor 3.6)
15. Ephraim Bonah Agyekum, Flavio Odoi-Yorke, Agnes Abeley Abbey, **Oluwatayomi Rereloluwa Adegboye**, Farhan Lafta Rashid (2025). "Techno-economic, Social and Environmental Analysis of Different Photovoltaic Cell Technologies Under Tropical Weather Conditions". International Journal of Thermofluids. <https://doi.org/10.1016/j.ijft.2025.101164>.
16. Ephraim Bonah Agyekum, Flavio Odoi-Yorke, Wulfran Fendzi Mbasso, Ransford Opoku Darko, **Oluwatayomi Rereloluwa Adegboye**, Agnes Abeley Abbey (2024). "Towards a comprehensive understanding of atmospheric water harvesting technologies—a systematic and bibliometric review". Energy Reports. <https://doi.org/10.1016/j.egy.2024.09.059>. (Q1, Impact Factor 4.7)
17. Abraham Ayobamiji Awosusi, Huseyin Ozdeser, Mehdi Seraj, **Oluwatayomi Rereloluwa Adegboye** (2024). "Achieving carbon neutrality in energy transition economies: exploring the environmental efficiency of natural gas efficiency, coal efficiency, and resources efficiency". Clean Technologies and Environmental Policy. <https://doi.org/10.1007/s10098-024-02932-w>. (Q1, Impact Factor 4.2).
18. **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda, Opeoluwa Seun Ojekemi, Ephraim Bonah Agyekum, Ehab E Elattar, Salah Kamel (2024). "Refinement of Dynamic Hunting Leadership Algorithm for Enhanced Numerical Optimization". IEEE Access. <https://doi.org/10.1109/ACCESS.2024.3427812> (Q1, Impact Factor 3.4)
19. Ephraim Bonah Agyekum, Christabel Nutakor, Tahir Khan, **Oluwatayomi Rereloluwa Adegboye**, Flavio Odoi-Yorke, Paul C Okonkwo (2024). "Analyzing the research trends in the direction of hydrogen storage—A look into the past, present and future for the various technologies". International Journal of Hydrogen Energy. <https://doi.org/10.1016/j.ijhydene.2024.05.399>. (Q1, Impact Factor 8.1).
20. **Oluwatayomi Rereloluwa Adegboye**, Ezgi Deniz Ülker, Afi Kekeli Feda, Ephraim Bonah Agyekum, Wulfran Fendzi Mbasso, Salah Kamel (2024). "Enhanced multi-layer perceptron for CO2 emission prediction with worst moth disrupted moth fly optimization (WMFO)". Heliyon. <https://doi.org/10.1016/j.heliyon.2024.e31850>. (Q1, Impact Factor 4.0)
21. **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda, Ephraim Bonah Agyekum, Wulfran Fendzi Mbasso, Salah Kamel (2024). "Towards greener futures: SVR-based CO2 prediction model boosted by SCMSSA algorithm" Heliyon. <https://doi.org/10.1016/j.heliyon.2024.e31766>. (Q1, Impact Factor 4.0)
22. Afi Kekeli Feda, **Oluwatayomi Rereloluwa Adegboye**, Ephraim Bonah Agyekum, Abdurrahman Shuaibu Hassan, Salah Kamel (2024). "Carbon Emission Prediction Through the Harmonization of Extreme Learning Machine and INFO Algorithm", IEEE Access. <https://doi.org/10.1109/ACCESS.2024.3390408>. (Q1, Impact Factor 3.4)
23. **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda, Opeoluwa Seun Ojekemi, Ephraim Bonah Agyekum, Abdelazim G Hussien, Salah Kame (2024). "Chaotic opposition learning with mirror reflection and worst individual disturbance grey wolf optimizer for continuous global numerical optimization", Scientific Reports. <https://doi.org/10.1038/s41598-024-55040-6>. (Q1, Impact Factor 4.9)
24. Afi Kekeli Feda, Moyosore Adegboye, **Oluwatayomi Rereloluwa Adegboye**, Ephraim Bonah Agyekum, Wulfran Fendzi Mbasso, Salah Kamel (2024). "S-shaped grey wolf optimizer-based FOX algorithm for feature selection", Heliyon. <https://doi.org/10.1016/j.heliyon.2024.e24192>. (Q1, Impact Factor 4.0)
25. **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda, Oluwaseun Racheal Ojekemi, Ephraim Bonah Agyekum, Baseem Khan, Salah Kamel (2024). "DGS-SCSO: Enhancing Sand Cat Swarm Optimization with Dynamic Pinhole Imaging and Golden

- Sine Algorithm for improved numerical optimization performance*", Scientific Report. <https://doi.org/10.1038/s41598-023-50910-x>. (Q1, Impact Factor 4.9)
26. Meshack Magaji Ishaya, **Oluwatayomi Rereloluwa Adegboye**, Ephraim Bonah Agyekum, Mohamed F. Elnaggar, Mohammed M. Alrashed, Salah Kamel (2023). "Single-tuned passive filter (STPF) for mitigating harmonics in a 3-phase power system", Scientific Reports. <https://doi.org/10.1038/s41598-023-47614-7>. (Q1, Impact Factor 4.9)
  27. **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda, Meshack Magaji Ishaya, Ephraim Bonah Agyekum, Ki-Chai Kim, Wulfran Fendzi Mbasso, Salah Kamel (2023). "Antenna S-parameter optimization based on golden sine mechanism based honey badger algorithm with tent chaos", Heliyon. <https://doi.org/10.1016/j.heliyon.2023.e21596>. (Q1, Impact Factor 4.0)
  28. Muhammad Umar, Awosusi Ayobamiji, **Oluwatayomi Adegboye** and Opeoluwaseun Ojekemi (2023). "Geothermal energy and carbon emissions nexus in leading geothermal-consuming nations: evidence from nonparametric analysis Submitted to Energy and Environment", Energy & Environment. DOI: 10.1177/0958305X231153972. (Q2, Impact Factor 4.2)
  29. **Oluwatayomi Adegboye** and Ezgi Deniz Ulker. "Hybrid Artificial Electric Field Algorithm Employing Cuckoo search with refraction learning for Engineering Optimisation Problems" (2023). Scientific Report (Q1, Impact Factor 4.9)
  30. **Oluwatayomi Adegboye** and Ezgi Deniz Ulker. "Gaussian Mutation Specular reflection learning and Local Escaping Operator based Artificial Electric Field Algorithm and its engineering application" (2023). Applied sciences. (Q1, Impact Factor 2.7).
  31. Erenel Zafer, **Adegboye Oluwatayomi** and Kusetogullari Huseyin. (2020). "A New Feature Selection Scheme for Emotion Recognition from Text". Applied Sciences. 10.5351. 10.3390/app10155351. (Q1, Impact Factor 2.7)

#### **PUBLISHED INTERNATIONAL CONFERENCES, PRINTED AS PROCEEDINGS & BOOK CHAPTER**

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1. **Oluwatayomi Rereloluwa Adegboye**, Afi Kekeli Feda, Ezgi Deniz (2025). "Improving Environmental Degradation Prediction Using Metaheuristic-Driven Machine Learning Technique". International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT). 10.1109/ISMSIT67332.2025.11268139
2. Afi Kekeli Feda, Ezgi Deniz Ülker, Abosede Omowumi Tibetan, Opeoluwa Seun Ojekemi, Oluwaseun Racheal Ojekemi, **Oluwatayomi Rereloluwa Adegboye** (2025). "Global Numerical Optimization Using Tent Chaotic Maps and Golden Sine Mechanism Enhanced Artificial Electric Field Algorithm". 7th International Congress on Human-Computer Interaction, Optimization and Robotic Applications (ICHORA). 10.1109/ICHORA65333.2025.11017001
3. Afi Kekeli Feda, **Oluwatayomi Rereloluwa Adegboye**, Abosede Omowumi Tibetan, Opeoluwa Seun Ojekemi, Tolga Öz, Ezgi Deniz Ülker (2024). "Di-AEFA: Diversified Artificial Electric Field Algorithm for Global Numerical Optimization". 2024 8th International Symposium on Innovative Approaches in Smart Technologies (ISAS). 10.1109/ISAS64331.2024.10845748
4. **Oluwatayomi Adegboye** and Ezgi Deniz Ulker (2022). "A Quick Performance Assessment for Artificial Electric Field Algorithm". Proceedings of 2022 International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA). 10.1109/HORA55278.2022.9799867
5. **Oluwatayomi Adegboye**, Mehmet Aldag and Ezgi Deniz Ulker (2020). "Support Vector Machines in Determining the Characteristics Impedance of Microstrip Lines" Proceedings of the International Conference on Artificial Intelligence and Applied Mathematics in Engineering (ICAIAME). 10.1007/978-3-030-79357-9\_39

#### **UNPUBLISHED PAPERS UNDER REVIEW**

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1. Andrew Alola, Tomiwa Adebayo, **Oluwatayomi Adegboye** and Opeoluwaseun Ojekemi. "The environmental and economic implications of the United States' energy mix: An artificial neural networks approach". Submitted to Energy & Environment
2. **Oluwatayomi Adegboye**, Ephraim Bonah Agyekum, Ki-Chai Kim, Tahir Khurshid and Salah Kamel "Operational performance of 6 different PV technologies for electricity, hydrogen, ammonia production and employment creation under tropical weather conditions in Nigeria". Submitted to International Journal of Hydrogen Energy.

#### **REFERENCES**

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