

## EDUCATION

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### Universiti Brunei Darussalam

Bandar Seri Begawan, Brunei Darussalam

Ph.D. in Data Science – Advisor: Dr. Owais Ahmad Malik

2022–2025

- Thesis: “An AI-Driven Approach to Spatiotemporal Wildfire Risk Assessment and Spread Prediction Using Multimodal Remote Sensing Imagery”
- Supported by UBD Graduate Research Scholarship (UGRS)

### Jodhpur National University

Rajasthan, India

M.S. in Computer Science & Engineering, GPA: Honors (76.75%)

2014–2016

- Thesis: “Scaling and Performance Analysis of SQL and NOSQL Databases”
- Supported by Kano State Foreign Scholarship Scheme

### Bayero University Kano

Kano, Nigeria

B.S. in Computer Science, GPA: 3.54/5.00

2009–2013

- Thesis: “Computer Security: A literature Review and Classification”

## EXPERIENCE

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### Universiti Brunei Darussalam

Bandar, Brunei

Graduate Teaching Assistance

2022 - Date

- Planning teaching, including lectures, seminars/tutorials and learning materials
- Supervising undergraduate research assistants or other personnel on research-related tasks
- Assumes responsibilities and assists faculty members in research and creative activities for a designated research area
- Present research findings at internal and external meetings, workshops, or academic conferences when applicable
- Assist in the planning and coordination of research activities to ensure timely completion of project goals.

### Skyline University Nigeria

Kano, Nigeria

Technical Support Assistant/Instructor

2018 - 2022

- Develop, create, and deliver lectures and perform practical sessions on programming languages
- Website and software application designing, building, or maintaining.
- Using scripting or authoring languages, management tools, content creation tools, applications, and digital media.
- Perform website updates.
- To install, configure, and repair the computers in labs, Classrooms, faculties, and departments.
- To maintain the projectors in labs and classrooms
- To ensure the proper functioning of all the equipment in the Computer Lab/Classroom and other departments.
- Make sure that technical help is provided to the clerical, administrative staff, students, and faculty.

### Kano State Polytechnics

Kano, Nigeria

Lecturer Part-time

2017 - 2023

- Teach in various settings, from small group tutorials to large lectures, ensuring content, methods of delivery, and learning materials meet the defined learning objectives for individual teaching sessions.

- Develop own teaching materials, methods, and approaches, considering established or agreed practices where necessary.
- Set and mark assignments and set examination questions, as well as assessing the work and progress of students by reference to defined criteria, and provide constructive feedback to students.
- Supervise the work of students, provide advice on study skills, and help them with learning problems.

### Gems Global Services

Kano, Nigeria

Web Developer / Tutor

2015 - 2018

- Website and software application designing, building, or maintaining.
- Responsible for the preparation and development of teaching materials and teaching programs as appropriate, ensuring that course content meets educational standards and is tailored to the needs of learners.
- Evaluating code to ensure it meets industry standards, is valid, is properly structured, and is compatible with browsers, devices, or operating systems.

## PUBLICATIONS (SELECTED)

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- [1] R. Y. Zakari, O. A. Malik, and O. Wee-Hong, “An enhanced wildfire spread prediction using multimodal satellite imagery and deep learning models”, *Remote Sensing Applications: Society and Environment*, p. 101632, 2025.
- [2] R. Y. Zakari, O. A. Malik, and O. Wee-Hong, “Machine learning-driven wildfire susceptibility mapping in new south wales, australia using remote sensing and explainable artificial intelligence”, *Natural Hazards*, pp. 1–27, 2025.
- [3] R. Y. Zakari, O. A. Malik, and O. Wee-Hong, “Mapping wildfire susceptibility in the tropical region of brunei: A machine learning and explainable ai approach using google earth engine with remote sensing data”, *Earth Science Informatics*, vol. 18, no. 2, pp. 1–22, 2025.
- [4] R. Y. Zakari and A. S. Muhammad, “Generative adversarial networks in remote sensing and its applications: An overview and motivations”, *Generative Adversarial Networks for Remote Sensing*, pp. 37–62, 2025.
- [5] R. Y. Zakari, J. W. Owusu, K. Qin, T. He, and G. Luo, “Seeing and reasoning: A simple deep learning approach to visual question answering”, *Big Data Mining and Analytics*, vol. 8, no. 2, pp. 458–478, 2025.
- [6] R. Y. Zakari, J. W. Owusu, K. Qin, H. Wang, Z. K. Lawal, and T. He, “Vqa and visual reasoning: An overview of approaches, datasets, and future direction”, *Neurocomputing*, p. 129345, 2025.
- [7] R. Y. Zakari and W. Shafik, “Generative adversarial networks in time series analysis and change detections using remote sensing”, in *Generative Adversarial Networks for Remote Sensing*, IGI Global Scientific Publishing, 2025, pp. 257–290.
- [8] A. S. Muhammad, R. Y. Zakari, A. B. Ari, C. Wang, and L. Chen, “Driving toward safety: A personalized approach to traffic risk assessment leveraging driver behaviour data”, in *2024 IEEE Smart World Congress (SWC)*, IEEE, 2024, pp. 1181–1188.
- [9] A. S. Muhammad, R. Y. Zakari, A. B. Ari, C. Wang, and L. Chen, “Explainable traffic accident severity prediction with attention-enhanced bidirectional gru-lstm”, in *2024 IEEE Smart World Congress (SWC)*, IEEE, 2024, pp. 1083–1090.
- [10] J. W. Owusu, R. Y. Zakari, K. Qin, and T. He, “Graph convolutional networks with fine-tuned word representations for visual question answering”, in *2024 IEEE Smart World Congress (SWC)*, IEEE, 2024, pp. 1381–1387.
- [11] R. Y. Zakari, Z. K. Lawal, K. Kalinaki, and U. D. Maiwada, “Time series forecasting techniques for climate trend prediction”, in *Reshaping Environmental Science Through Machine Learning and IoT*, IGI Global, 2024, pp. 282–310.

- [12] R. Y. Zakari, J. W. Owusu, K. Qin, and A. M. Sagir, "A transformer-based approach for effective visual question answering", in *2024 IEEE Smart World Congress (SWC)*, IEEE, 2024, pp. 1532–1539.
- [13] R. Y. Zakari, W. Shafik, K. Kalinaki, and C. J. Iheaturu, "Internet of forestry things (ioft) technologies and applications in forest management", in *Advanced IoT technologies and applications in the industry 4.0 digital economy*, CRC Press, 2024, pp. 275–295.
- [14] H. Wang, K. Qin, R. Y. Zakari, G. Lu, and J. Yin, "Deep neural network-based relation extraction: An overview", *Neural Computing and Applications*, pp. 1–21, 2022.
- [15] Z. Lawal, H. Yassin, and R. Zakari, *Flood prediction using machine learning models: A case study of kebbi state nigeria. in 2021 ieee asia-pacific conference on computer science and data engineering (csde)(pp. 1-6)*, 2021.
- [16] H. Wang, K. Qin, G. Lu, J. Yin, R. Y. Zakari, and J. W. Owusu, "Document-level relation extraction using evidence reasoning on rst-graph", *Knowledge-Based Systems*, vol. 228, p. 107 274, 2021.

\*For more publications, please visit **Google Scholar**: [Google Scholar Profile](#)

## CURRENT PROJECTS

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- **A Physics-Informed Neural Network for Next-Day Wildfire Spread Prediction** In progress  
 Developing a hybrid model involves combining both data-driven neural networks and physics-informed neural networks (PINNs) to achieve more robust and accurate predictions of wildfire spread.

## TEACHING

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- **Teaching Assistant** at Universiti Brunei Darussalam Spring 2022  
**Courses**  
 ZA-3202 *Machine Learning*  
 ZZ-1104 *Essential Mathematics for Digital Science*
- **Part Time Lecturer** at Kano State Polytechnics 2017-2019  
**Courses**  
 MTH 1301 *Elementary Mathematics I*  
 CSC 2201 *Introduction to Computer Science*

## SKILLS

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- **Programming:** Python, JavaScript, SQL
- **Remote Sensing & GIS Tools:** Google Earth Engine (GEE), QGIS, ArcGIS, SNAP
- **Frameworks:** PyTorch, TensorFlow, Scikit-learn, Keras
- **Libraries:** Geopandas, Pandas/Numpy, Matplotlib/Seaborn, Rasterio

## SCHOLARSHIPS AND AWARDS

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- The UBD Graduate Research Scholarship (UGRS) — University of Brunei Darussalam 2021–2022
- Kano State Government Oversees Masters Scholarship Scheme 2014–2015
- The Chinese Government Scholarship Council (CSC) 2019

## REFEREES

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On Request