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| DAY 1 | Tuesday, November 26, 2024 |
| Conference Theme | AI for Future Industrialisation of Medicine in Sub-Saharan Africa |
| Venue | Glass House, Faculty of Education, University of Lagos |
| Anchor | Ms. Blessings Mosugu |

| Time | Activities |
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| 7:30 - 9:20 | Registration |
| 9:20 - 10:40 | Call to Order |
| | Opening prayer |
| | National Anthem and UNILAG Anthem |
| | Recognition of dignitaries and special guests |
| | Opening remarks by ICAIR 2024 Conference Chair (Dr. Victor Odumuyiwa) |
| | Opening remarks from Head, Department of Computer Sciences |
| | Opening remarks from Dean of Science, University of Lagos |
| | Goodwill messages from other dignitaries |
| | Opening remarks from Commission Manager, GIZ Digital Transformation Centre (Dr. Thuweba Diwani) |
| | Opening speech from MD/CEO Galaxy Backbone |
| Opening remarks by Vice Chancellor, University of Lagos. (Prof. Folasade Ogunsola) | |

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| 10:40 - 11:30 | Key Note Speech 1 | Dr. Olatunji Omisore (Associate Researcher, Shenzhen Institutes of Advanced Technology, China) |
| Topic: Advancing Frontiers of Artificial Intelligence for Robotic Surgery: Innovations in Surgical Robotics, Imaging and Informatics | | |
| 11:30 - 11:35 | Group Photograph | |
| 11:35 - 11:45 | Tea break | |
| 11:45 - 13:00 | Panel Discussion 1 | Focus: AI-Driven Policy in Healthcare: Transforming Systems, Enhancing Outcomes |
| 13:00 - 13:40 | Key Note Speech 2 | Dr. Uyi(O.T) Stewart (Chief Data and Technology Officer, Data Org, Washington DC) |
| Topic: Towards Generative Innovations for Africa Healthcare Sector | | |
| 13:40 - 14:30 | Panel Discussion 2 | Focus: Advancing Research-Driven AI Innovations in sub-Saharan Africa through Purposeful Research Collaborations |
| 14:30 - 15:15 | Lunch Break | |

| Time | Parallel Session 1 | Parallel Session 2 |
|---------------|--|---|
| 15:15 - 17:00 | Venue: Glass House, Faculty of Education, University of Lagos | Venue: Glass House, Faculty of Education, University of Lagos |
| | Session Chair: Dr. Oladipupo Sennaiké | Session Chair: Dr. Femi Alamu |
| | Research Paper 1: WhisperMed: Fine-Tuned ASR for Enhanced Medication Communication in Clinical Settings (Abdulhameed Dere and Abdulquddus Ajibade) | Research Paper 5: Leveraging AI for Predictive Diagnosis and Treatment in Telemedicine: A Case Study in Illness Prediction Using Machine Learning Models (Andikan Okoro, Emmanuel Ubom and Abia Mfon) |
| | Research Paper 2: Implementing Stratified K-FOLD Techniques for Data Intrusion Detection Models in Internet of Health Things Systems (Edosa Osa, Enosa Iyekekpolo, Augustus Ibhaze, Wilson Sadoh, and Patience Orukpe) | Research Paper 6: Improving the automated estimation of malaria parasite density detection (Ibrahim Mouazamou Laoualy Chaharou, Ismail Lawani, Theophile Dagba, Jules Degila, and Habiboulaye Amadou Boubacar) |
| | Research Paper 3: Profile of HIV-Infected Women of Child-Bearing and Prevention of Vertical Transmissions of HIV/AIDS in Sub-Saharan Africa: A Machine Learning Approach (Oluwatosin Akinsola, Olusola Afuwape and Patricia Akintan) | Research Paper 7: Ethical Considerations in Using AI for Mental Health Diagnosis and Treatment Planning: A Scoping Review (Yewande Ojo) |
| | Research Paper 4: Generative Medical Artificial Intelligence in Medical Imaging and Radiation Therapy: Enhancing Diagnosis, Workflow, and Patient Care for Effective Health Outcomes (Aleruchi Chuku, Emmanuel I. Richard, Dlama J. Zira, Ibrahim S. Osanga, Alexander Monday, Abdulganiyu Salami & Ibitomisin S. Femi) | Research Paper 8: Harnessing Digital Tools for Primary Healthcare Delivery: A Case Study from Mascot Healthcare Clinic, Akoka, Lagos State, Nigeria." (Kehinde Lawal) |



Machine Intelligence Research Group (MIRG)
Department of Computer Sciences
University of Lagos

Presents
4th International Conference on
Artificial Intelligence and Robotics

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| DAY 2 | Wednesday, November 27, 2024 |
| Venue | Glass House, Faculty of Education, University of Lagos |
| Anchor | Mr. Oluwaseun Ajidagba |

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| 8:30 - 9:00 | Registration |
| 9:00 - 9:45 | Call to Order |
| | Opening prayer |
| | National Anthem and UNILAG Anthem |
| | Recognition of dignitaries and special guests |
| | Goodwill message from other dignitaries |
| | Opening remarks from Vice Chancellor, University of Lagos. |
| | Opening Speech of the Honorable Commissioner for Health, Lagos State. |

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| 9:45 - 10:30 | Key Note Speech 3 | Dr. Bayo Adekamnbi (Founder, Data Science Nigeria) |
| Topic: Nigeria AI Collective and the National AI Strategy - Building an Inclusive and Sustainable AI Ecosystem for Economic Growth and Innovation | | |
| 10:30 - 11:30 | Panel Discussion 3 | Focus: Building Inclusive Infrastructure for Future Industrialisation of Medicine in sub-Saharan Africa |

11:30 - 11:50

Tea Break

| Time | Parallel Session 1 | Parallel Session 2 |
|---------------|---|---|
| 11:50 - 13:40 | Venue: Glass House, Faculty of Education, University of Lagos | Venue: Glass House, Faculty of Education, University of Lagos |
| | Session Chair: Dr. Doyin Afolabi | Session Chair: Dr. Solomon Akinboro |
| | Research Paper 9: Prediction of Respiratory Disease Using Machine Learning (Confidence Ifeoma Odoh, Dr. Rosemary Chika Nweze, Dr. Roseline Uzoamaka Paul and Ukamaka Victoria Maduahanwu) | Research Paper 14: Eliminating Bias in Artificial Intelligence (AI) Generated Predictions and Plans for Resource Allocation and Management in Hospitals. (Enosa Iyekekpolo, Edosa Osa, Patience Orukpe, David Ikhu-Omoregbee and Erumena Ekoko) |
| | Research Paper 10: Calorie-Specific Recipe Recommender System for Overweight and Obesity Using Natural Language Processing and Similarity Measures (Bukola Badeji-Ajisafe, Betsy Otoy, Abimbola O. Ajibade, Olanike C. Akinduyite and Stephen. E Obamiyi) | Research Paper 15: Improving Hand Motion Recognition in Robot-assisted Endovascular Surgery with Resolution-based Dynamic Time Warping (Olatunji Mumini Omisore) |
| | Research Paper 11: AI-Driven Brain Tumor Detection and Segmentation Using Computer Vision: A Solution for Accessible Healthcare in Sub-Saharan Africa (Faruq Afolabi) | Research Paper 16: Optimizing Cholera Outbreak Prediction in Nigeria: A Comparative Analysis of Machine Learning Models for Public Health Applications (David Akanji and Muminu O. Adamu) |
| | Research Paper 12: Improving Medical Diagnosis with LLM Reprompting (Amina Balarabe Musa, Egun P. Fasina, Chika P. Ojiako, Babatunde A. Sawyerr, Abdul-Azeez Murainah) | Research Paper 17: The Future of Pharmaceutical Information: A Case for Generative AI Over Pharmacopoeias and Medical Apps (Opeyemi Bashirudeen, Olubayo Adekanmbi and Anthony Soronnadi) |
| | Research Paper 13: Development of a Bilingual Diagnostic Chatbot (English and Yoruba) for Infectious Disease Symptom Checks using Large Language Models with Retrieval Augmented Generation (Ouwadamilare Dairo, Rasheed Temitope) | Research Paper 18: Towards an AI-Based Patient Digital Twin (Abiodun Abimboye and Egun Fasina) |

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| | Sanni, Oluwagbemiga Victor Okunola & Victor Odumuviwa) | |
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| 13:40 - 14:30 | Lunch Break |
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| 14:30 - 15:10 | Key Note Speech 4 | Dr. Stephen Odaibo (CEO/Founder RETINA AI-Health, Houston, Texas) |
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Topic: Of Language and Health: Building Africa's Healthcare Data Infrastructure in the LLM Era.

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| 15:10 - 16:15 | Panel Discussion 4 | Focus: AI UNIPOD - Melting Pot for Future AI-driven Innovations in sub-Saharan Africa |
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| 16:15 - 17:00 | Presentations and Demos by Sponsors |
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| 17:00 | Visit round the campus |
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|   <p>Machine Intelligence Research Group (MIRG) Department of Computer Sciences University of Lagos</p> | <p>Presents 4th International Conference on Artificial Intelligence and Robotics</p> |
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| DAY 3 | Thursday, November 28, 2024 |
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| Venue | Glass House, Faculty of Education, University of Lagos |
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| Anchor | Dr. Adewole Rufai |
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|--------------------|--|
| 8:30 - 9:00 | Registration |
| 9:00 - 9:45 | Call to Order |
| | Opening prayer |
| | National Anthem and UNILAG Anthem |
| | Recognition of dignitaries and special guests |
| | Goodwill message from other dignitaries |
| | Opening remarks from Vice Chancellor, University of Lagos. |

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| 9:45 - 10:30 | Key Note Speech 5 | Prof. Ozlem Tastan Bishop (Professor of Structural Bioinformatics, Rhodes University, South Africa) |
| Topic: Machine learning and structural bioinformatics in drug discovery for evolving proteins. | | |
| 10:30 - 11:00 | Sponsors/Exhibitors/Demo Presentation | |

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| 11:00 - 11:20 | Tea Break |
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| Time | Parallel Session 1 | Parallel Session 2 |
|---------------|---|---|
| 11:20 - 13:00 | Venue: Glass House, Faculty of Education, University of Lagos | Venue: Glass House, Faculty of Education, University of Lagos |
| | Session Chair: Dr Lucky Ikuvwerha | Session Chair: Dr. Sola Edegbami |
| | Research Paper 19: Improving Patient Diagnostics and Engagement in Sub-Saharan Africa Using Conversational Artificial Intelligence (Jennifer Iloekwe) | Research Paper 24: Leveraging Geo-NLP for Enhanced Anti-Retroviral Drug Distribution in Nigeria: Insights from Social Media and News Data (Opeyemi Bashirudeen, Olubayo Adekanmbi, Anthony Soronnadi and Ahmad Ibrahim) |
| | Research Paper 20: Towards a Doctor Digital Twin Framework for Healthcare 5.0 (Praise Anene and Egun Fasina) | Research Paper 25: Towards a Multiclass Neural Decision Tree for Large-Scale Data Classification (Ayodeji A. Ajayi, Egun P. Fasina, Babatunde A. Sawyerr, Abdul-Azeez Murainah, Chika P. Ojiako) |
| | Research Paper 21: Comparative Analysis of Machine Learning Algorithms for Heart Disease Prediction Using CDC and BRFSS Data: A Focus on Oversampling and Ensemble Techniques. (Ridwan Amokun, Taofik Arowolo and John Eke) | Research Paper 26: AI for Supply Chain and Optimization in Healthcare (Comfort Ezenwa) |
| | Research Paper 22: A Bibliographic Evaluation and Research Landscape of Machine Learning in Educational Technology (Samuel-Soma Ajibade) | Research Paper 27: Machine Learning for Personalized Medicine in Sub-Saharan Africa: A Review (Majesty Akpara and Chika Yinka-Banjo) |
| | Research Paper 23: Towards a Cloud-Based Health Recommender System for Enhancing Online Doctor Consultation (Oluwakemi Akindele, Chika Ojiako, Egun Fasina and Babatunde Sawyerr) | Research Paper 28: Towards a Doctor Digital Twin Framework for Healthcare 5.0 (Praise Anene and Egun Fasina) |

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| 13:00 - 14:00 | Setting the Agenda for MIRG-ICAIR 2025 |
| 14:00 - 15:00 | Lunch Break |

