

ICDAM-2024

5th International Conference on Data Analysis and Management

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The Karkonosze University of Applied Sciences, Jelenia Gora, Poland, Europe
&
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&
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Date: 15th - 16th June 2024*

***** CALL FOR PAPERS *****

SPECIAL SESSION ON

[Advances in Medical and Physical Health Using AI]

SESSION ORGANIZERS:

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SESSION DESCRIPTION:

AI (Artificial Intelligence) has made significant strides in advancing medical and physical health, offering innovative solutions across various domains. The integration of AI into healthcare continues to evolve, offering the potential to revolutionize medical and physical health practices, improve patient outcomes, and enhance overall healthcare quality. Ongoing research and development in these fields are likely to bring even more advancements in the coming years.

RECOMMENDED TOPICS:

Topics to be discussed in this special session include (but are not limited to) the following:

1. Medical Diagnosis and Imaging:

- AI algorithms have demonstrated high accuracy in analysing medical images for conditions such as cancer, fractures, and neurological disorders.
- Computer vision techniques help in detecting patterns and abnormalities in medical images, aiding radiologists in making faster and more accurate diagnoses.

2. Personalized Medication:

- AI algorithms analyse genetic, clinical, and lifestyle data to tailor treatment plans for individual patients.

- Precision medicine applications use AI to identify optimal drug combinations and dosages based on a patient's unique characteristics.
- 3. Drug Discovery and Development:**
 - AI accelerates the drug discovery process by analyzing massive datasets to identify potential drug candidates.
 - Machine learning models predict the efficacy and safety of drugs, reducing the time and cost involved in bringing new medications to market.
 - 4. Remote Patient Monitoring:**
 - AI-powered devices and wearables monitor patients in real-time, collecting data on vital signs, activity levels, and other health metrics.
 - Continuous monitoring allows for early detection of health issues and timely interventions, reducing hospitalizations and improving patient outcomes.
 - 5. Virtual Health Assistants:**
 - AI-driven chatbots and virtual assistants provide personalized health information, answer queries, and offer guidance on managing chronic conditions.
 - These virtual assistants enhance patient engagement and can support individuals in making healthier lifestyle choices.
 - 6. Predictive Analytics for Disease Prevention:**
 - AI analyses patient data to identify patterns and predict the likelihood of developing certain diseases.
 - Early identification of risk factors allows for proactive interventions and preventive measures to reduce the onset of diseases.
 - 7. Rehabilitation and Physical Therapy:**
 - AI-based systems assist in designing personalized rehabilitation programs for individuals recovering from injuries or surgeries.
 - Virtual reality (VR) and augmented reality (AR) applications aid in physical therapy, making rehabilitation exercises more engaging and effective.
 - 8. Chronic Disease Management:**
 - AI helps in managing chronic conditions by analyzing patient data to optimize treatment plans.
 - Remote monitoring of chronic patients using AI ensures timely adjustments to medications and interventions, reducing the risk of complications.
 - 9. Mental Health Support:**
 - AI applications provide mental health support through chatbots, virtual therapists, and mood tracking tools.
 - Natural language processing (NLP) enables these systems to understand and respond to users' emotional states, offering assistance and resources for mental well-being.
 - 10. Robotics in Surgery:**
 - AI-powered robotic systems assist surgeons in performing minimally invasive procedures with precision and accuracy.
 - These systems enhance surgical outcomes, reduce recovery times, and improve the overall patient experience.
 - 11. AI with Edge Computing for Advanced Medical and Physical Support:**
 - Edge computing allows AI algorithms to process data locally on edge devices, reducing latency using decentralized processing, offline capabilities, enabling real-time insights reducing the burden on network bandwidth.
 - Edge computing enhances data privacy and security by keeping sensitive healthcare information localized which also optimize the communication cost.
 - 12. Healthcare Operations and Administration:**
 - AI streamlines administrative tasks, including appointment scheduling, billing, and medical coding.
 - Natural language processing facilitates the extraction of valuable information from unstructured data, improving overall efficiency in healthcare operations.

SUBMISSION PROCEDURE:

Researchers and practitioners are invited to submit papers for this special theme session on **[Advances in Medical and Physical Health Using AI] on or before [1st June 2024]**. All submissions must be original and may not be under review by another publication. INTERESTED AUTHORS SHOULD CONSULT THE CONFERENCE'S GUIDELINES FOR MANUSCRIPT SUBMISSIONS at <https://icdam-conf.com/downloads> . All submitted papers will be reviewed on a double-blind, peer-review basis.

NOTE: While submitting a paper in this special session, please specify [**Advances in Medical and Physical Health Using AI**] at the top (above paper title) of the first page of your paper.

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