Guest Editorial

The realm of digital health continues to transform healthcare systems on a global scale. With its expanding possibilities and diverse applications, digital health is revolutionizing how care is accessed, delivered, and managed, bringing benefits to patients and citizens worldwide.

This symposium proceedings compiles the scientific oral and poster presentations, student projects, and theses showcased at DigiHealthDay-2023. DigiHealthDay, an international educational and networking series, is hosted annually by the European Campus Rottal-Inn, Deggendorf Institute of Technology, Germany. Now in its fourth edition, DigiHealthDay-2023 took place on November 9th and 10th, 2023, featuring an array of keynote presentations by leading experts, as well as panel discussions. This hybrid event revolved around the theme “Global Digital Health – Today, Tomorrow and Beyond” and attracted more than 1400 participants from 104 countries who engaged both in-person and virtually. This yearly symposium primarily aims to inspire emerging researchers to explore innovative solutions through digital health to address global healthcare challenges. This year’s edition provided a platform for researchers to present their work in areas focusing on digital health.

The first article in the field of telemedicine and remote healthcare presents a study that conceptualizes telemedicine as the intersection of two vectors, namely patient condition and technological readiness, addressing the potential and challenges in telemedicine for healthcare workers and patients. As part of our theme on EHR and Health Information Systems, we present three insightful articles that tackle critical issues in medical data management and decision-making. The article on problems of medical data compatibility in the integration of information systems explores the challenges of medical data compatibility, focusing on the complexities of integrating health information systems to create unified patient portfolios for healthcare providers. The next article is a scoping review of the role of clinical decision support systems in ICUs during the COVID-19 pandemic. Finally, the article on innovative databases in ecomonitoring information systems introduces a novel approach to biomedical information storage by proposing the use of genetic code images as relational database keys, aiming to enhance data reliability and integrity.

Within the theme of health data management and analytics, we present the article ‘Unlocking the power of Health Data - by ensuring the public can trust the EHDS.’ The article discusses public trust as a cornerstone for scaling the European Health Data Space (EHDS), proposing a societal compact to ensure ethical and transparent health data reuse. Another key piece in this issue is titled 'Global Digital Health Diplomacy,' which explores delivery models and bottlenecks in global health data systems. This paper advocates for global digital health diplomacy as a crucial strategy for establishing interoperable health data systems, fostering cross-border healthcare through coordinated international efforts. It offers insights into the path forward for overcoming existing challenges in digital health diplomacy.

We present a special focus article, 'AI Research Advancing Healthcare: AI Integration, Interoperability, and Sustainability Challenges,' which delves into the critical role of artificial intelligence in healthcare. This article explores the transformative role of AI in healthcare, addressing challenges in integration, interoperability, and sustainability, with a focus on patient-centric and blockchain-based systems. Our second special focus on digital health education highlights the outcomes of the first Blended Intensive Program (BIP) on AI for Health that was organized in collaboration with partners from five European nations and support from the EU's ERASMUS+ program. Reflecting on the outcomes of the DigiHealth-AI Blended Intensive Program, this study highlights participants' evolving views on AI's role in healthcare and their concerns about benefits of AI in the healthcare sector, employment, bias and privacy of AI systems.

Once again, we are delighted to partner with the Journal of Applied Interdisciplinary Research and the Ukrainian Journal of Medical Informatics and Engineering to present this collection of articles from DigiHealthDay-2023. These articles are organized by the key themes discussed during the symposium. We sincerely thank all the contributors for their valuable research and contributions to this edition of the Journal of Applied Interdisciplinary Research. We hope that this edition provides inspiration as you explore the ever-evolving landscape of 'Global Digital Health'!

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