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Editorial

eHealth and mHealth

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eHealth (electronic health) and mHealth (mobile health) have been rapidly evolving in recent years, offering innovative solutions to healthcare challenges. The combination of these two fields can provide many health-related data while keeping track of data exchange, interoperability, and security. The potential large amount of data provided by many wearables and sensors, in turn, provides an excellent basis for data-driven methods employing machine learning algorithms and further artificial intelligence (AI)-based methods— interested readers are referred to the Special Issue *Challenges and Opportunities in Electronic Medical Record (EMR)* [1]. Accordingly, eHealth and mHealth cover a wide range of topics and applications.

Nevertheless, providing and exchanging large amounts of data will also bring about new challenges. Mobile apps used for health tracking often require personal data that could be vulnerable to hacking or third-party misuse; the collection, storage, and sharing of health data raise concerns about data breaches, unauthorized access, and misuse of sensitive personal health information. In terms of interoperability, different healthcare systems, platforms, and devices often fail to communicate with each other efficiently, but, even when this barrier can be overcome, healthcare professionals may be resistant to adopting eHealth or mHealth tools, especially if they disrupt existing workflows. In addition, both eHealth and mHealth solutions heavily rely on technology, which means they are susceptible to technical failures, downtime, and bugs. Therefore, it is critical to ensure that health data are accurate and clinically useful, which require documented evaluations of the proposed methods and explainability for decision systems.

For this Special Issue, we selected contributions that reflect the breadth of the field. The publications by Aloqaily et al. [2] and Baumgartner et al. [3] focused on the aforementioned security aspects, while Muralinath et al. [4] highlighted the data-driven machine learning aspects. In *Deep Learning Framework for Advanced De-Identification of Protected Health Information*, Aloqaily et al. applied *conditional random field* (CRF) models for the de-identification of medical records. In *Masketeer: An Ensemble-Based Pseudonymization Tool with Entity Recognition for German Unstructured Medical Free Text*, Baumgartner et al. developed a tool to mask medical free texts in accordance with the HIPAA Safe Harbor Guidelines. Muralinath et al. proposed a framework for cost-sensitive EEG classification based on graph kernel-based Koopman embeddings in *Metastable Substructure Embedding and Robust Classification of Multichannel EEG Data Using Spectral Graph Kernels*.

The studies by Paraschiv et al. [5], Saleh et al. [6], and Maher et al. [7] address specific health-related problems. By applying *transfer entropy* (TE) analysis, Paraschiv et al. investigated connectivity patterns in patients with schizophrenia, Saleh et al. proposed a deep learning framework enabled by XAI (*explainable artificial intelligence*) to reduce maternal mortality risks while maintaining secure data transmission in *An Explainable Deep*

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Received: 11 March 2025
Accepted: 12 March 2025
Published: 31 March 2025

Citation: Neumayer, B.; Sauermann, S.; Hanke, S. eHealth and mHealth. *Future Internet* **2025**, *17*, 152. https://doi.org/10.3390/fi17040152

Learning-Enhanced IoMT Model for Effective Monitoring and Reduction of Maternal Mortality Risks, and Maher et al. investigated the accuracy and usability of a fall detection system in *In-Home Evaluation of the Neo Care Artificial Intelligence Sound-Based Fall Detection System*. On the other hand, Basulo-Ribeiro and Teixeira considered future economic and commercial aspects using a SWOT (strengths, weaknesses, opportunities, and threats) analysis in *The Future of Healthcare with Industry 5.0: Preliminary Interview-Based Qualitative Analysis* [8].

To reflect the scale of the subject and the pace of development, this Special Issue also comprises three review papers investigating current eHealth and mHealth topics. A current ongoing development is the integration of generative artificial intelligence with a strong focus on GPTs (generative pre-trained transformers)—this topic is thoroughly covered in *Trends, Challenges, and Applications of Large Language Models in Healthcare: A Bibliometric and Scoping Review* by Charciolo and Malgeri [9]. The articles *Artificial Intelligence to Reshape the Healthcare Ecosystem* by Reali and Femminella [10] and *Artificial Intelligence Applications in Smart Healthcare: A Survey* by Gao et al. [11] investigated other aspects of integrating AI-based approaches in eHealth and mHealth solutions.

Conflicts of Interest: The authors declare no conflict of interest.

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