

Deep Learning for Internet of Anesthesia, Intensive Care, Emergency and Pain Medicine

Deep learning is a technique for implementing machine learning that provides an effective solution in health analytics encompassing a series of techniques which will be more helpful to human intelligence system for handling uncertainty and subjective vagueness in decision making process. Among them, artificial intelligence (AI) has been around for over three decades, and this new approach of artificial intelligence, due to enhancements in technology, both software, and hardware, has resulted in the fact that human decision-making is considered inferior and erratic in many fields: none more so than medicine. Deep Machine learning algorithms with access to large data sets can be trained to outperform clinicians in many respects. AI's effectiveness in accurate diagnosis of various medical conditions and medical image interpretation is well documented. Modern AI technology has the potential to transform medicine to a level never seen before in terms of efficiency and accuracy; but is also potentially highly disruptive, creating insecurity and allowing the transfer of expert domain knowledge to machines. Anesthesia, Intensive Care, Emergency and Pain Medicine are some complex medical disciplines and assuming AI can easily replace experienced and knowledgeable medical practitioners is a very unrealistic expectation. AI can be used in anesthetics to develop, in some respects, more advanced clinical decision support tools based on machine learning.

This Special issue focuses on the complexity of both AI developments, deep learning, machine learning, neural networks, etc. and opportunities of AI in Anesthesia, Intensive Care, Emergency or Pain Medicine for the future. It will provide current advances in AI tools and hardware technologies as well as outlining how these can be used in the fields of Anesthesia, Intensive Care, Emergency or Pain Medicine.

The topics (in Anesthesia, Intensive Care, Emergency and Pain Medicine fields) of interest include, but are not limited to:

- *Deep learning methodologies for medical data analysis*
- *Deep learning and block chain assisted medical efficient product designs*
- *Deep learning algorithm for medical decision support systems*
- *Cognitive deep learning for wearable medical devices*
- *Deep learning for energy management in IoMT devices*
- *Deep learning for data analytics in body sensor networks*
- *Pattern recognition*
- *Image retrieval. biological imaging Molecular/pathologic image analysis gene data analysis multiple modalities X-ray CT MRI PET ultrasound*
- *Deep learning algorithm for medical decision support systems in heart disease*
- *Machine learning applied to Healthcare Systems*
- *Computational methods for COVID-19 prediction and detection*
- *Disease diagnosis using deep learning in IoMT*

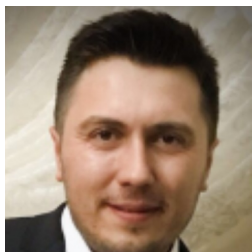
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Deep Learning for Internet of Anesthesia, Intensive Care, Emergency and Pain Medicine**Guest Editors****Dr. Mazin Abed Mohammed**

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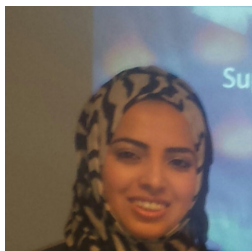
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