

# IEEE JOURNAL OF BIOMEDICAL AND HEALTH INFORMATICS

**J-B HI Special Issue on “New Age of Deep Learning on Drug Discovery: Research to Practice”**

Artificial intelligence is a branch of computer science that attempts to simulate human intelligence in a machine. AI systems are powered by algorithms, using techniques such as machine learning and deep learning to demonstrate “intelligent” behavior. Deep learning is a subset of machine learning that has shown significant superior performance than some existing traditional machine learning approaches. Deep Learning ensures pharmaceutical discovery, comprising progressive image study, the prognosis of molecular form and process, and automatic creation of creative chemical substance commodities with custom effects. Drug Discovery is a very time-consuming and expensive task, and Deep Learning can make this process faster and cheaper. Deep Learning enormously expedites the Drug Discovery approach and provides global measures to prevent the dissemination of transmissible diseases. AI incorporated with Deep Learning furnishes more additional effects on drug discovery. Deep Learning accesses a future in this area to create new drug innovations to control, handle, alleviate or heal diseases. More progressive technology guides the immediate vision and develops quicker. It is even a complicated method, expensive, and takes a lot of time.

The proposed special issue will focus on novel deep learning techniques in drug discovery and disease treatment. We will invite investigators to contribute research article and reviews of describing recent findings which use deep learning techniques for the research of drug discovery and disease treatment.

Potential topics include, but are not limited to

- Deep learning for medical image processing
- Natural language processing in medical documents
- Deep Learning Paradigm Based on Probability-Density
- Deep Learning Paradigm and its Applications
- Artificial Intelligence and its evolution in Healthcare Computing
- Applications of Evolutionary Deep Learning Approaches
- Evolutionary Computing and Machine Learning for Real-world Problems
- Deep Neural Network for natural language processing
- Supervised and Un-supervised Classification Algorithms
- Evolutionary Algorithms: Present, Past, future Applications
- Soft Computing and its various Paradigms Applications
- Parallel Programming/Multi R core/Many-core/GPUs
- Applications of Evolutionary Computing and its Emerging Paradigms

## **Guest Editors**

Prof. Dr. Wali Khan Mashwani, [walikhan@kust.edu.pk](mailto:walikhan@kust.edu.pk); [mashwanigr8@gmail.com](mailto:mashwanigr8@gmail.com)

Institute of Numerical Sciences, Academic Block-III, Kohat University of Science and Technology (KUST), Kohat 26000, KPK, Pakistan

Dr. M. Irfan Uddin, [irfanuddin@kust.edu.pk](mailto:irfanuddin@kust.edu.pk)

Institute of Computing, Academic Block-III, Kohat University of Science and Technology (KUST), Kohat 26000, KPK, Pakistan

Prof. Dr. Atila Goktas, [gatilla@mu.edu.tr](mailto:gatilla@mu.edu.tr)

Department of Statistics, Faculty of Science, Mugla Sıtkı Koçman University, Mugla 48000, Turkey

## **Key Dates**

Deadline for Submission: 05<sup>th</sup> July, 2023  
First Reviews Due: 05<sup>th</sup> November, 2023  
Revised Manuscript Due: 05<sup>th</sup> January, 2024  
Final Decision: 05<sup>th</sup> April, 2024

