



# Special Issue on Artificial Intelligence Empowered Big Data Analytical Patterns for Medical Applications

S. Vimal<sup>1</sup> · Seungmin Rho<sup>2</sup> · Danilo Pelusi<sup>3</sup>

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Medical Applications are the emerging areas where most of the clinical treatments and diseases have been treated with Artificial Intelligence. Big Data presents significant challenges to deep learning, including large scale, heterogeneity, noisy labels, and non-stationary distribution, among many others. In order to realize the full potential of Big Data, we need to address these technical challenges with new ways of thinking and transformative solutions. The research challenges posed by Big Data are not only timely, but will also bring ample opportunities for deep learning. Together, they will provide major advances in science, medicine, and business. The rapidly expanding field of big data analytics has started to play a pivotal role in the evolution of healthcare practices and research. It has provided tools to accumulate, manage, analyze, and assimilate large volumes of disparate, structured, and unstructured data produced by current healthcare systems. Big data analytics has been recently applied towards aiding the process of patient analytics and disease monitoring. The Clinical data process and diagnosis procedures for various Medical problems should be automated that may help in improving medical treatment diagnosis. Medical data deals with several challenges including non-availability of sophisticated large size databases, high dimensional samples, and class imbalance to name a few. AI based analytical patterns can handle large scale data more efficiently as compared to the traditional machine learning methods and based on the inference, the diagnosis process can be carried in the medical fields.

The articles for the special issue have widespread coverage in the field of healthcare analytics, deep learning-based health diagnostics, histopathological image classification using IoMt, post stroke rehabilitation using hybrid deep learning approach.

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✉ S. Vimal  
svimalphd@gmail.com

<sup>1</sup> University Center for Research and Development (UCRD), Chandigarh University, Mohali, Punjab, India

<sup>2</sup> Department Industrial Security, Chung-Ang University, Dongjak-gu, Seoul 06974, Korea

<sup>3</sup> Faculty of Communication Sciences, University of Teramo, Via Balzarini, 1, 64100 Teramo, Italy