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GUEST EDITORIAL

Cognitive-Inspired Computational Computing for Intelligent Health Informatics

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I. INTRODUCTION

Cognitive-inspired Computational Computing systems focus on the knowledge sharing and scaling ability between patients, doctors, clinics, etc. Therefore, doctors can effectively plan for effective treatment based on medical evidence and patient profile. Intelligent health informatics is prominently deciding on the common language to explore different treatment options, data analyses, and critical patient data retrieval. Therefore, they can enhance the work of professionals to help improving the quality and consistency of decision-making across an organization. The objective of cognitive systems in healthcare is to increase, accelerate, and scale expertise to make powerful everyone in their roles. This issue of the *Journal of Artificial Intelligence and Technology* presents five state-of-the-art peer-reviewed contributions, ranging from theory to prototyping, and covering several distinct application topics.

II. PREVIEW OF THE STUDIES IN THIS ISSUE

We outline the topic domains and the key contributions of the selected papers in this section to help readers browsing this issue:

(i) The first paper by Mani *et al.* [1] presents a method for hyperparameter selection of the desired convolution neural networks model that classifies breast histopathological images. They consider a transfer learning method that overcomes the issue of insufficient data. Authors use a familiar pretrained network VGG-16 (Visual Geometric Group) with Logistic Regression as a binary classifier.

(ii) The second paper by Deshpande *et al.* [2] design and test an all-encompassing strategy for the reliable and automated classification of lung cancer using Computed Tomography (CT) scans. This is possible only by combining deep learning with more conventional, artisanal image characteristics.

(iii) The third paper by Rama Krishna *et al.* [3] presents a novel multilevel thresholding and deep learning model for intelligent dermoscopic image processing in skin lesion identification.

(iv) The fourth paper by Pradhan *et al.* [4] develops a low computational complexity-based neural network with higher accuracy in detection of respiratory diseases. A Cascaded Perceptual functional link-based artificial neural network is used to capture the nonlinearity in the data for better classification performance with low computational complexity.

(v) The fifth paper by Kumar *et al.* [5] presents a cutting-edge framework for personalized chronic pain management, leveraging the power of artificial intelligence and personality insights. It explores the intricate relationship between personality traits and pain perception, expression, and management, identifying key correlations that influence an individual's experience of pain.

The guest editor would like to thank the reviewers for their efforts in reviewing the papers and the authors for their positive responses to the reviewers' comments and suggestions. Also, special thanks are due to the journal editor in chief, Prof. Yinong Chen, the managing editor, and the members of the editorial board, for their support of this issue, which is hoped to constitute a valuable addition to scientific and developmental knowledge in artificial intelligence and health informatics and its associated technologies.

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