EDITORIAL

Special issue on neural computing and applications in cyber intelligence: ATCI 2022

Yuwei Yan[1] · Jemal Abawajy[2]

This special issue focuses on all aspects on techniques and applications in cyber intelligence research. The purpose of this special issue is to provide a forum for presentation and discussion of innovative ideas, cutting-edge research results, and novel techniques, methods, and applications on all aspects of cyber intelligence. It includes suggested papers from 2022 International Conference on Applications and Techniques in Cyber Intelligence (ATCI2022) as well as an open call. The submitted manuscripts were reviewed by experts from both academia and industry. After two rounds of reviewing, the highest quality manuscripts were accepted for this special issue. This special issue will be published by Neural Computing and Applications as special issues. The selected papers are summarized as follows.

Zhang et al. (computer-aided digital media art creation based on artificial intelligence) analyzed the possibility of combining digital media art with AI, and the positive effects of combining it with digital media art creation are discussed. Hu et al. (cross-domain dynamic access control based on "blockchain + artificial intelligence") discusses the necessity of cross-domain AC research, then introduces several common AC models, and finally explains the application of blockchain and AI in AC. Liu and Chen (early warning control model and simulation study of engineering safety risk based on a convolutional neural network) proposes a risk early warning model based on a convolutional neural network, which identifies and analyzes the risk points in engineering through engineering site pictures and provides early warning for engineering risk points in time. Yin et al. (the evaluation of an active soft waist exoskeleton for repetitive lifting task) determine

how a lightweight active soft waist exoskeleton (ASWE) reduces the oxygen consumption and activity of lower back muscles of the wearer performing the repetitive lifting tasks. The modified adaptive sparrow search algorithm (MASSA), an SSA modification, is created by Sun et al. (a modified adaptive sparrow search algorithm based on chaotic reverse learning and spiral search for global optimization) to address these problems.

Hao et al. (sentiment recognition and analysis method of official document text based on BERT–SVM model) aims to study the sentiment official document text recognition and analysis method based on the neural network BERT model. Li et al. (MapReduce-based distributed tensor clustering algorithm) firstly implements a parallelization algorithm based on MapReduce on Hadoop platform using the basic idea of MapReduce and improves the K-means algorithm for the problems of blindness and easy to fall into local optimum when selecting randomly in clusters. Pang et al. (five-dimensional evaluation system and perceptron intelligent computing performance measurement methods based on medical heterogeneous equipment health data) focuses on the preprocessing method of medical heterogeneous equipment health data sources and the performance measurement of single-layer perceptron network intelligent computing. Jiang et al. (a novel interest evolution network based on transformer and a gated residual for CTR prediction in display advertising) propose an interest evolution network (TGRIEN) based on transformer and a gated residual. Duan et al. (a method of network public opinion prediction based on the model of grey forecasting and hybrid fuzzy neural network) analyzes the current micro blog emergency propagation, focusing on introducing the implicit law of emotion vector, user browsing, and emergencies.

An optimization for image stereo-matching algorithm using deep reinforcement learning (DRL) is proposed by Li et al. (optimization for image stereo-matching using deep reinforcement learning in rule constraints and parallax estimation) in rule constraints and parallax estimation.

✉ Yuwei Yan
yanyuwei@tsu.edu.cn

1   Taishan University, No. 525, Dongyue Street, Tai'an 271000, China

2   Deakin University, 221 Burwood Highway, Burwood, VIC 3125, Australia

Ubul et al. (multimodal sentiment system and method based on CRNN-SVM) proposes a multimodal sentiment analysis method based on the multimodal sentiment analysis method that can obtain more sentimental information sources and help people make better decisions. Xu and Guo (a multisource feature extraction network for salient object detection) propose a novel multi-source feature extraction network (MFEN), which can integrate salient features, boundary features, and global feature, simultaneously. Zou (DDCM: a decentralized density clustering and its results gathering approach) proposes a decentralized clustering method based on density clustering and the content-addressable network technique. Cai et al. (automatic generation of Labanotation based on human pose estimation in folk dance videos) propose a new Labanotation generation method for folk dance videos based on pose estimation. Fang et al. (dual dimensionality reduction on instance level and feature level for multi-label data) proposes a novel two-stage method to reduce dimensionality for both instances and features on multi-label data.

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