

Special Session
on
The Importance of Artificial Neural Networks (ANNs) in Smart Era
at
10th International Conference on
Innovations in Bio-Inspired Computing and Applications (IBICA 2019)
GIET University, Odisha, India December 16-18, 2019
<http://www.mirlabs.net/ibica19/>

Objectives and Scope

A Neural Network (NN) contain a set of algorithms, build based on the human brain to recognize patterns from various applications. In neural network, we interpret data (sensory) through some machine perception with providing labelled or making clustering in raw input. The patterns recognized by NNs are numerical (having vectors), images, sound, text or time series, which need to be determined/ translated for many practical applications like Smart home, Smart cities, Smart e-healthcare, smart agriculture. On another hand, an artificial neural network (ANN) is a computational model, work based on neural networks, i.e., with consisting several processing elements with receiving several inputs and delivering outputs (i.e., based on their predefined activation functions (AF)). ANNs are usually inspired by biologically computational networks. Today's neural network are being used in several Internet of Things (IoT) based applications like detecting fraud, threat in IoT network, or performance analysis of smart things (or IoTs), etc. This special session tries to cover several types of ANNs, its tools/ mechanisms with other deep learning models and respective uses in various practical/ useful applications (which are building with connection of IoTs). This special session focuses various topics like multilayer perceptrons (MLPs) with backpropagation learning algorithms, Generative adversarial network, etc. The uses of such topics are very essential in many applications. For example, MLPs (a type of ANNs) are based on a supervised procedure and work based on three layers (i.e., input, hidden, and output) in various aspects like data pre-processing, overfitting, sensitivity analysis, and threat analysis etc. In addition, this special session requires attention from researchers/ scientific community; also require innovative work on ANNs, its tools and algorithms (including sub-related fields) uses in various useful applications.

We invite high quality contributions from all research areas that address the emerging data challenges. Several topics of interest include, but are not limited to, the following:

- Practical uses of Neural Networks in Smart Applications like healthcare, agriculture, defense, etc.
- Neural network for Optimization of services in Internet of Things (IoT)
- Tools available for Neural Networks (for analysing services)
- Fraud and anomaly detection in IoT network using neural networks
- Threat analysis of IoT networks using artificial neural network
- Performance assessment in Internet of Robotic Things/ Internet Connected Things using Neural Networks
- Artificial Neural Networks and deep learning uses in Smart Applications like Agriculture, etc.
- Biomedical Image Analysis using Convolutional Neural Network, and Recurrent Neural Network etc.

- Analysis of Biomedical Signals such as EEG and ECG using Deep Learning neural networks
- Imaging Processing using deep learning including Neural network for Biomedical IoTs/ clinical applications
- Temperature Prediction using Deep Learning and Neural Networks in Internet of Things
- Natural language processing using neural networks
- Role of Deep Learning neural networks models and Artificial Intelligence in real world's Applications
- Hopfield Network, Biological Neural Networks, Generative adversarial network, Convolutional Neural network and Recurrent Neural network uses in Smart/ IoTs Applications
- Distributed neural network for internet of things
- All other fields which provide essential uses of Deep learning and neural networks models in solving real world's problems like image recognition, hand-written recognition, flood monitoring, etc.

Paper Publications

All accepted and registered papers will be published in AISC Series of Springer, indexed in ISI Proceedings, EI-Compendex, DBLP, SCOPUS, Google Scholar and Springerlink.

Important Dates

Paper submission due: September 01, 2019

Notification of paper acceptance: October 15, 2019

Registration and Final manuscript due: October 30, 2018

Conference: December 16 - 18, 2018.

Special Session Chairs

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