Editor's Note

With the rise of global economy and Electronic Commerce (EC), efficient inter-organizational planning and deployment for value chain processes have become important. Radio-frequency Identification (RFID), Near Field Communication (NFC), and related wireless technologies are evaluated to be some of the most significant technological innovations in the twenty-first century. In the past few years, wireless and context-awareness technology have led to much hope and optimism. The mainstream press hails these innovations as the avant-garde in technology and business. The Internet of Everything (IoE) goal is the intelligent connection of people, process, data, and things. The IoE describes a world where billions of objects have sensors to detect, measure, and assess their status, all connected over public or private networks using standard and proprietary protocols. Hence, this special issue investigates the state-of-art AI and deep learning approaches for successful systems or applications in the IoE environment. In addition, this special issue also wants to understand the direct and indirect effects of using these smart technologies to build language information processing based on the Web of Things (WoT) around the smart cities and societies.

The first article entitled "What Drives IoT-Based Smart Pet Appliances Usage Intention? The Perspective of the Unified Theory of Acceptance and Use of Technology Model", by Chen and Lin, investigate the key factors for pet owner adoption of "smart" pet appliances. The Unified Theory of Acceptance and Use of Technology (UTAUT) model is used as the main research framework. The statistical analysis finds out that performance expectancy, effort expectancy and facilitating condition all have a positive impact on the intention to use.

The second article entitled "Energy-Aware Path Planning by Autonomous Underwater Vehicle in Underwater Wireless Sensor Networks for Safer Maritime Transportation", by Acarer, solves the energy-aware path planning problem with autonomous underwater vehicles by using five popular bio-inspired algorithms including Ant Colony Optimization (ACO), Particle Swarm Optimization (PSO), Teaching Learning-based Optimization (TLBO), Genetic Algorithm (GA), and Grey Wolf Optimizer (GWO). The experimental results indicate that the GA approach achieves better than others for the system convergence and energy consumption.

The third article entitled "Evaluating the Impact of Pumping on Groundwater Level Prediction in the Chuoshui River Alluvial Fan Using Artificial Intelligence Techniques", by Su et al., applies the multiple linear regression (MLR), support vector regression (SVR), and Long Short-Term Memory Networks (LSTM) to predict the groundwater level and collection data from the Chuoshui River Alluvial Fan (CRAF) area in Taiwan. The experimental results indicate that the LSTM model can achieve the better stability, strong generalization capabilities, and high prediction accuracy.

The fourth article entitled "Semi-Supervised Machine Learning Approaches for Thyroid Disease Prediction and its Integration With the Internet of Everything", by Agraz, implements a hybrid model of semi-supervised learning methods, namely FixMatch, Co-training, and self-training, in conjunction with other supervised learning methods, including Naive Bayes and logistic regression. This research finds the potential contributions of semi-supervised learning techniques and presents a good reference for the IoE in healthcare advancement.

The fifth article entitled "Enhancing Tennis Serve Scoring Efficiency: An AI Deep Learning Approach", by Liu, applies the deep learning model to automatically classify the serving position, landing position, and use of tennis techniques. The proposed model can achieve a 98.27% accuracy in the automatic classification of serve scores.

The sixth article entitled "The Human Motion Behavior Recognition by Deep Learning Approach and the Internet of Things", by Li et al., integrates the deep learning model - Convolutional Neural Networks (CNN) with the Internet of Things (IoT) technology for human motion behavior recognition. Finally, the recognition approach for human motion behavior can achieve an average accuracy of 94.41% and acts as a good reference for the intelligent surveillance and health management.

The seventh article entitled "Predicting Consumer Electronics E-Commerce: Technology Acceptance Model and Logistics Service Quality", by Wu et al., provides a structural model and machine learning algorithm with SHapley Additive exPlanations (SHAP) for a comprehensive analysis of Technology Acceptance Model (TAM) in conjunction with logistics service quality. The findings show that attitude, perceived usefulness, and informativeness are the most critical factors affecting the consumers' purchase intention.

The eighth article entitled "Constructing the Public Opinion Crisis Prediction Model Using CNN and LSTM Techniques based on Social Network Mining", by Lou et al., adopts the Convolutional Neural Network (CNN) and Long Short-Term Memory (LSTM) techniques to build a predictive model for anticipating public opinion crises in social network mining. As a result, the hybrid CNN-LSTM model obtains a high accuracy rate of 92.19% with low loss value of 0.4075.

The ninth article entitled "Design of Traffic Electronic Information Signal Acquisition System Based on Internet of Things Technology and Artificial Intelligence", by Wang, designs and implements a real-time signal acquisition system within the IoT environment. It can promptly gather, analyze, and process collected signals. Finally, the experimental results prove that it can outperform the accuracy of existing equipment, making it more appropriate for traffic signal acquisition applications.

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Acknowledgments

The guest editors are thankful for the best efforts of our authors and reviewers without whom the current issue and its publication in the journal itself would not have been possible. We also thank the Editor-in-Chief, Professor Elena Verdú and Professor Rubén González Crespo with their gentle assistance and guide in the whole process of preparation of this issue.

DOI: 10.9781/ijimai.2024.08.006