EDITORIAL

Editorial

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This second issue of the eighth volume of the Journal of Reliable Intelligent Environments includes eight research papers.

Accident prevention and safety assistance using IOT and Machine Learning, by S. Uma and R. Eswari, presents a prototype of system that integrated Raspberry Pi, Pi Camera and sensors for monitoring driver's eye movements, detecting yawning, detecting toxic gases, and alcohol consumption to prevent accidents and provide safety assistance to drivers. Driver's behaviors are detected by means of Machine Learning algorithms to prevent accidents.

Modeling vehicle indoor air quality using sensor data analytics, by D. Lohani, A. Barthwal and D. Acharya, proposes a system able to monitor, analyze, and predict air quality inside the vehicle. It relies on a sensing system (an off-the-shelf sensor Sensordrone), which is connected to an Android Smartphone using Bluetooth Low Energy. Collected data are then exploited to predict the quality of the air and the level of CO_2 within the vehicle.

An exploration of semi-supervised and language-adversarial transfer learning using hybrid acoustic model for hindi speech recognition, by Ankit Kumar and Rajesh Kumar Aggarwal, combines semi-supervised training and language-adversarial transfer learning to improve the Automatic Speech Recognition (ASR) performance in case of limited resources. In particular, a framework for Hindi speech recognition is presented.

PSPHERE: person specific human error estimation, by Shabnam Samima and Monalisa Sarma, presents PSPHERE a framework for the human error probability while a user interacts with an environment to accomplish specific tasks. The framework enhances the performance of other approaches because it is able to partially take into account the characteristics of the actual user.

Classification of dairy cows' behavior by energy-efficient sensor, by Brahim Achour, Malika Belkadi, Rachida Aoudjit, Mourad Laghrouche, Mustapha Lalam and Mehammed Daoui, presents an intelligent energy-efficient sensor-based system for the monitoring of the health of dairy cows in precision farming applications.

Hofstede's dimensions of culture and gender differences in UI satisfaction, by Ahmed Alsswey, Hosam Al-Samarraie and Reem Yousef, focuses on the integration of cultural elements in the design of User Interfaces. In particular, the authors have explored the potential of integrating Hofstede's dimensions of Arabic culture into the design of mobile UI.

Prediction of quality of service of fog nodes for service recommendation in fog computing based on trustworthiness of users, by Vijay L. Hallappanavar and Mahantesh N. Birje, proposes an approach for QoS prediction based on the trustworthiness of IoT devices that allows choosing reliable and trustworthy fog nodes. The proposed method relies on a hybrid technique to combine the item-based user similarity, context-based user similarity and trust computation based on multiple source feedback mechanism.

Underwater estimation of audio signal prediction using fruit fly algorithm and hybrid wavelet neural network, by K. Martin Sagayam, Ahona Ghosh, Bharat Bhushan, J. Andrew, Korhan Cengiz and Ahmed A. Elngar, focuses on modeling an optimized wavelet neural network for efficient measurement of the mean absolute error and the root mean square error of underwater acoustic signals.

We hope these articles stimulate the community to further improvements in this area and perhaps to collaborations between the participating teams so that complementary solutions can be used in a combined way to tackle more complex problems.

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