Short Communication
Volume 10:S1, 2021

Journal of
Telecommunications System & Management

ISSN: 2472-0437 **Open Access**

Investigation on Prediction Systems based on LSTM —prediction for dissolved oxygen (DO) in water

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Abstract

Climate change and industrial development have brought greater uncertainty to water resources, and the quality of water has a very significant impact on humans and the entire ecosystem. The current water quality testing relies on the data collected by various monitoring systems, some of which are not immediately available or require more expensive equipment to analyze. Most experts agree that the amount of dissolved oxygen (DO) in the water is the main indicator for judging the quality of water. However, the process of obtaining information is more complicated and cumbersome. If the difficulty of obtaining the information can be simplified, it will make water resources better. Management is more efficient. In recent years, artificial intelligence is often developed to assist in many complex decision-making tasks. We develop a prediction model based on LSTM. We design a machine learning model and provide a large amount of data to make it find the rules and learn from it. Improve the predictive ability of the model. Through the model, the water quality can be monitored and analyzed, and the data obtained can be used to judge and predict the water quality state and deal with water pollution problems in time.

Biography:

Hsuan-Hsuan Chao, received a B.S. degree in Computer Science and Information Engineering from Aletheia University, New Taipei City in 2019. Currently, she is reading for a master's degree of Computer Science and Information Engineering at Aletheia University. Her research interests include AI and image processing.

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