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APPLICATION OF ARTIFICIAL INTELLIGENCE IN ENVIRONMENTAL MODELLING AND SUSTAINABILITY

Singh Sushant K
Virtusa Corporation, USA

Artificial Intelligence (AI) is the most critical solution tool for various business challenges and software products and services. However, the application of AI in environmental modeling and sustainability is still in infancy. Recently, the world economic forum has brought the attention of the global community to the implementation of AI in climate change, biodiversity and conservation, healthy oceans, water security, clean air, and weather and disaster resilience. This study aims to present the application of AI in environmental data modeling and sustainability with a focus on water quality and security. A methodological framework of a cloud-based AI decision-support system of water quality monitoring is presented. Various water quality prediction models are developed using the cutting edge machine and deep learning algorithms. All the machine and deep learning models are validated using the k-fold technique. The predictive accuracy and the robustness of the models are evaluated by comparing overall prediction accuracy, root mean square error, the area under the curve (AUC) of the receiver operating characteristic (ROC) curve, kappa statistics, and the loss. The methodological framework could be used as a decision-making environmental sustainability tool for designing pro-active management policies

Biography

Singh Sushant K is a Data Scientist and leads an Artificial Intelligence-Machine Learning Scientist team at USA's one of the leading IT companies. He holds two PhD degrees, one from Montclair State University, New Jersey, USA in Environmental Management and another from Magadh University, Bodhgaya, Bihar, India in Environmental Science. He has authored more than 30 papers, books, and book chapters and has been serving as a Reviewer and an Editorial Board Member of reputed journals.

sushantorama@gmail.com