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Opinion

DEVELOPMENT OF MACHINE LEARNING MODEL FOR GREEN TECHNOLOGY DEVELOPMENT

Afsaneh Lavasani*

Department of Chemical and Material Engineering, University of Alberta, Edmonton, Canada

OPINION

Sustainable engineering is the process of designing or operating systems that enable effective use of goods and resources, i.e., at a scale that won't jeopardise the environment or the ability of future generations to meet their own requirements. Numerous fields, including healthcare, agriculture, security, and daily life, can benefit from machine learning. Additionally, machine learning is essential to sustainable computing. The rise of machine learning and even its exponentially growing effects on numerous marketplaces necessitate an assessment of its effects on the accomplishment of sustainable innovation. A survey of supervised and unsupervised machine algorithms utilised in sustainable engineering is presented in this study [1].

A branch of artificial intelligence called machine learning focuses on how systems may learn from data. It researches computer algorithms that aid in finding patterns in data and reaching important conclusions. Machine learning algorithms use data as input, and to provide the most accurate and desirable results, various statistical formulas are used. By 2030, 10 billion people are projected to live in metropolitan areas worldwide. The effective and efficient use of all global resources by every country becomes a crucial fundamental component in order to achieve the rapidly expanding global population, globalisation, hyper-urbanization, economic stability, and environmental stability.In order to maintain ecological balance, sustainability entails making optimal use of natural resources while also setting aside money for future generations. By adopting sustainable engineering, we may create a product while utilising a minimal amount of

resources. A key component in the development of sustainable technology is machine learning [2-4]. Using classifiers like decision trees can aid in predicting the energy efficiency of residential areas. Similar to this, supervised learning techniques such as Bayesian Linear Regression, Neural Networks, and Decision Trees can be used to provide a framework for sustainable hydropower generation in reservoirs. Using SVM and Random Forest, the energy consumption of commercial buildings may be calculated. Neural networks and Bayesian network models can be used to create a model that optimises environmental protection for both industrial facilities and merchandise.Machine learning models are programmes that have been taught to recognise patterns in fresh data and anticipate outcomes. These models are modelled as a mathematical function that receives requests in the form of input data, processes that data to create predictions, and then returns an output. These models are first trained using a collection of data, and then an algorithm is given to them so they may analyse the data, find patterns, and learn from the data. These models can be used to forecast the unknown dataset once they have been trained [5,6].

Given that nanomedicine can provide higher solubility than other micron-sized pharmaceuticals, the pharmaceutical industry has placed a high priority on the production of nanomedicine. Drug nanoparticles have improved solubility in aqueous solutions due to their increased surface area and consequent free energy, which can solve the problem of low water solubility for the majority of medications, notably BCS Class II of drugs, according to the Biopharmaceutical Classification system.

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Correspondence Author:

Afsaneh Lavasani*

Department of Chemical and Material Engineering, University of Alberta, Edmonton, Canada

E-mail: afsanehl@gmail.com

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