NEURAL NETWORKS IN MATERIALS SCIENCE AND ENGINEERING: A REVIEW OF SALIENT ISSUES

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ABSTRACT

The paper 'Neural Networks in Materials Science and Engineering: A Review of Salient Issues' has been extensively reviewed. The paper has explained neural networks and had clearly presented it as a powerful predictive tool that can be trained to solve very complex problems in materials Science and Engineering. Attempts have also been made at comparing linear regression model with neural networks and the findings are that neural networks are more sophisticated in terms of providing solutions to materials science and engineering problems than linear regression model. The paper has revealed that neural networks have found wide applications in materials science and engineering particularly in solving very complex problems: problems with established theories but the quantitative determination was lacking because of so many independent and interacting parameters. Finally the paper concluded by raising some salient issues that had to do with the use of neural networks in materials science and engineering. One of such issues is the misapplication of neural network methodologies, thereby limiting their potential benefit.

Keywords: Materials science, Engineering, Application, Neural networks, Salient issues, Artificial.