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Ananthapadmanaban Dattaguru*

Department of Mechanical Engineering, SSN College of Engineering, India

Introduction

“The whole world is buzzing with the two words Data Science and Artificial Intelligence. Like all other fields, Materials Science will also be hugely impacted by these two concepts. While these two concepts are not entirely new, the Science behind the concepts is changing and evolving at a fast pace. Materials Scientists are presented with a huge deal of data regarding the different alloys and Composites. It has always been a challenge to classify different materials based on the type of material and application. New alloys are being designed at a very fast pace and monitoring these alloys becomes a very big challenge. This is where Data Science comes into picture. Some of the literature gives traditional methods of alloy design and classification as Paradigm 1, 2 and 3 and Data driven methods as Paradigm 4.

Structured property relationships have always been at the root of research in Materials Science. Now, advances in AI and Data Science are and will bring out hitherto unknown correlations between structures and properties, both at the micro and the macro level. Research has been conducted extensively in groups throughout the world, but sharing of information, especially if it is sensitive, has always been tricky. It is thought that this sharing of databases will help the research community to evolve more rapidly. The forefathers of AI have also warned that Ai is a double-edged sword, and it should be used with utmost care. It is to supplement already existing tools of education or for that matter Industrial tools, but it cannot entirely replace human beings. The dangers of AI were discussed recently and more than 40% of the top executives the world over felt that this technology has inherent dangers. I end this article by saying that man has an inherent curiosity to discover new things, but man should also weigh the pros and cons of AI and Data Science before they are used widely. Already these two useful technologies are being made use of but caution is the key.

***Corresponding author:** Ananthapadmanaban Dattaguru, Department of Mechanical Engineering, SSN College of Engineering, Chennai, India

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