Data-Driven Study in Mechanical Engineering: Machine Learning Approach

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ABSTRACT

In this Symposia a paper on data-driven study in the field of mechanical engineering, applying the machine learning approach to unravel the trends and practices in the industries to enhance performance is considered. As traditional methodologies encounter limitations in handling the complexity of advanced mechanical systems, the current discussion explores the new way of using machine learning techniques to extract valuable insights from large datasets. The symposium focuses on developing predictive models, identifying correlations, and adopting suitable decision-making processes in various mechanical engineering applications. With the use of machine learning algorithms, such as regression, classification, and clustering, the gap between the available data and the informed decision-making can be bridged. The results showcase the potential of machine learning in transforming the processes in mechanical engineering by offering the advantages like improved efficiency, precision, and innovation in the design and operation of mechanical systems. The paper contributes to the growing body of knowledge on the application of data-driven techniques in mechanical engineering. Also, it provides a foundation for further exploration and implementation of the techniques in different types of industrial contexts.

Keywords: Data Driven; Machine Learning; Mechanical Engineering; Industries; Techniques.