JMA-720

Attribute-Object Ordered Soft Set and its Applications in Decision-Making Problems Based on Comparison of Attributes and Objects

Sudhir Maddheshiya* and Julee Srivastava

Department of Mathematics and Statistics, Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, India

*Corresponding author's e-mail: sudhirmaddy149@gmail.com

ABSTRACT

This paper introduces a novel mathematical construct, termed the "Attribute-Object Ordered Soft Set," which addresses a fundamental challenge encountered in practical scenarios. In real-life applications, it is a common requirement to compare not only the attributes of individual objects but also the objects themselves based on their specific attributes. To effectively address this requirement, the Attribute-Object Ordered Soft Set mandates that both objects and attributes must be subjected to a systematic ordering process. This imposition of order facilitates the handling of complex decision-making problems in real-world contexts. To demonstrate the applicability and utility of this concept, the paper presents a suite of algorithmic solutions tailored to various classes of real-life decision-making challenges. These algorithms are crafted to provide effective and systematic methodologies for tackling a diverse array of decision-making problems, further enhancing the practicality and versatility of the Attribute-Object Ordered Soft Set in real-world contexts.

Keywords: Soft set; Decision-making; Ordered soft set

How to Cite

S. Maddheshiya and J. Srivastava, "Attribute-Object Ordered Soft Set and its Applications in Decision-Making Problems Based on Comparison of Attributes and Objects", *AIJR Abstracts*, pp. 21–21, Feb. 2024.

DOI: 10.21467/abstracts.165 ISBN: 978-81-965621-7-5 (eBook), 978-81-965621-4-4 (Paperback)