

Measures of embedding for closed intervals in the real line

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In a previous paper, the authors proposed a measure for comparing the precision of two interval-valued fuzzy sets [1]. The family with better properties is grounded in aggregating the degree of inclusion or embedding for the intervals defining the membership function of the sets at any point within the referential. Therefore, our study focuses on closed subintervals included within the unit interval.

Consequently, when addressing interval-valued fuzzy sets, only intervals with extreme values between zero and one are taken into consideration. Nonetheless, the utilization of intervals can be extended to numerous other domains, and we should not confine our investigation to this specific scenario. This indeed constitutes the primary objective of this study. Thus, we will present an axiomatic definition for the concept of embedding measure for closed intervals on the real line and we will explore some general properties. Furthermore, we will examine various methods for deriving families of these measures and compare their behavior using experimental data.

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References

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