Granular computing (GrC) is an emerging computing paradigm of information processing. It concerns the processing of complex information entities called information granules, which arise in the process of data abstraction and derivation of knowledge from information. Granular computing is more a theoretical perspective, it encourages an approach to data that recognizes and exploits the knowledge present in data at various levels of resolution or scales.
Granular Box Regression Methods for Outlier Detection

computing provides a rich variety of algorithms including methods derived from interval mathematics, fuzzy and rough sets and others. Within this framework granular box regression was proposed recently. The core idea of granular box regression is to determine a fuzzy graph by embedding a given dataset into a predefined number of “boxes”. Granular box regression utilizes intervals a challenge is the detection of outliers. In this paper, we propose borderline method and residual method to detect outliers in granular box regression. We also apply these methods to artificial as well as to real data of motor insurance.

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