An Interval Tree Approach to Predict Forest Fires using Meteorological Data

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Abstract

Interval prediction can be more useful than single value prediction in many continuous data streams. This paper introduces a novel Interval Prediction Tree IP3 algorithm for interval prediction of numerical target variables from temporal mean-variance aggregated continuous data. This algorithm characterized by: processing incoming mean-variance aggregated multivariate temporal data, splitting each of the continuous features of the input according to the best mean-variance and making stable interval predictions of a target numerical variable with a given degree of statistical confidence. As shown by empirical evaluations in forest fires data set the proposed method provides better performance than existing regression tree models.

References


Index Terms

Computer Science

Information Sciences

Keywords

Interval Prediction, Mean-Variance Aggregation, Prediction Tree, Forest Fires.