










#24835 Summary

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Submission

Authors	Firman Aziz, Armin Lawi
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Title and Abstract

Title	Increasing electrical grid stability classification performance using ensemble bagging of C4.5 and classification and regression trees
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Abstract	<p>The increasing demand for electricity every year makes the electricity infrastructure approach the maximum threshold value, thus affecting the stability of the electricity network. The decentralized smart grid control (DSGC) system has succeeded in maintaining the stability of the electricity network with various assumptions. The data mining approach on the DSGC system shows that the decision tree algorithm provides new knowledge, however, its performance is not yet optimal. This paper poses an ensemble bagging algorithm to reinforce the performance of decision trees C4.5 and classification and regression trees (CART). To evaluate the classification performance, 10-fold cross-validation was used on the grid data. The results showed that the ensemble bagging algorithm succeeded in increasing the performance of both methods in terms of accuracy by 5.6% for C4.5 and 5.3% for CART.</p>
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