Under the Title:

Rough Set Reduction: A Novel Orthogonal Learning-based Grey Wolf Optimization Strategy

Place of Publication:

First, a grey literature review revealed that the initial set through discarding its redundant features. Current heuristic-based reduction approaches cannot perform efficiently in some cases. Hence, more enhanced, new stochastic optimizers are required to determine more better-quality reductions. Grey wolf algorithm is a new robust meta-optimizer that mimics the idealistic social dominance of wolves in nature. In this research, a novel orthogonal learning-based grey wolf approach is proposed to solve rough set reduction tasks. Based on presented technique, a minimal attribute reduct is discovered and validated efficiently. Several experiments are performed on well-known UCI datasets. The obtained results demonstrate competency and effectiveness of the proposed orthogonal learning-based GWO in tackling reduction tasks.

Keywords:
optimization; data mining; feature selection; grey wolf optimizer; rough set theory

Link to the Article:

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In this work, we have shown the importance of grey literature in the field of rough set theory.