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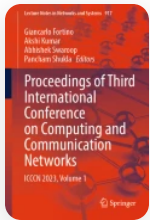
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Application of Gradient Boosting Classifier–Based Computational Intelligence to Detect Drug Addiction Threat in Society

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Abstract

Currently, drug and alcohol addiction has become a major menace to society's youth. As responsible citizens of this country, we must act now to keep these young brains from succumbing to this lethal addiction. In this research, a method based on intelligent analytics is designed for forecasting the threat of drug addiction using machine learning algorithms. Initially, we identify several reasons for drug addiction by speaking with health professionals, individuals addicted to drugs, and reading related studies and articles. Then we gather information from both addicts and abstainers. After preprocessing the data, we use Random Forest, Naive Bayes, Adaptive Boosting, and Gradient Boosting machine and assess the interpretation of each of these classifiers using certain well-known performance criteria. Outcome with Gradient Boosting showed promising with the highest accuracy rate of 95.4% and minimum error rate of 0.0854.

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