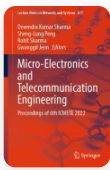


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A Performance Comparison of State-of-the-Art Imputation and Classification Strategies on Insurance Fraud Detection

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Abstract

Annually, around one trillion in premiums are gathered by the insurance market, which engages over a thousand enterprises globally. Insurance fraud is when a person or group presents bogus insurance claims to receive compensation or privileges that they are not obligated to, and it costs the insurance business tens of billions. As a corollary, the insurance industry faces a challenging burden in detecting insurance fraud. Examining and identifying fraudulent elements is a common existing approach to detecting fraud, but it requires a long time and is tedious since it might lead to inaccurate results. The focus of this research is to develop an automated machine learning classification framework with the best imputation technique for detecting fraud claims. As a result, the logistic regression-based iterative imputer coupled with XGBoost classifier achieved the highest accuracy of 90% in this comparison research.

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