Optimize Data Evaluation Metrics for Fraud Detection Using Machine Learning

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Abstract : The use of technology has benefited society in more ways than one ever thought possible. Unfortunately, though, as society's knowledge of technology has advanced, so has its knowledge of ways to use technology to manipulate people. This has led to a simultaneous advancement in the world of fraud. Machine learning techniques can offer a possible solution to help decrease this advancement. This research explores how the use of various machine learning techniques can aid in detecting fraudulent activity across two different types of fraudulent data, and the accuracy, precision, recall, and F1 were recorded for each method. Each machine learning model was also tested across five different training and testing splits in order to discover which testing split and technique would lead to the most optimal results.