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## Effectiveness of Machine Learning Algorithms on Battling Counterfeit Items in E-commerce Marketplaces

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For e-commerce marketplaces, counterfeit goods are a major issue since they endanger public safety in addition to causing customer unhappiness and revenue loss. Traditional techniques to identify fake goods in online marketplaces take too long and have a narrow reach, hence they are ineffective. Machine learning algorithms have become a potential tool for swiftly and precisely identifying counterfeit goods in recent years. The usefulness of two machine learning algorithms in identifying fake goods in online marketplaces is examined in this research. The study assesses the performance using a sizable dataset of descriptions, title, prices and seller names from many well-known e-commerce platforms. The study's findings show that machine learning algorithms significantly affect the detection of fake goods in online marketplaces.

**Keywords:** counterfeit listing, decision trees, e-commerce, machine learning, random forest