

Unsupervised learning for robust Bitcoin fraud detection

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Abstract:

The rampant absorption of Bitcoin as a cryptographic currency, along with rising cybercrime activities, warrants utilization of anomaly detection to identify potential fraud. Anomaly detection plays a pivotal role in data mining since most outlying points contain crucial information for further investigation. In the financial world which the Bitcoin network is part of by default, anomaly detection amounts to fraud detection. This paper investigates the use of trimmed k-means, that is capable of simultaneous clustering of objects and fraud detection in a multivariate setup, to detect fraudulent activity in Bitcoin transactions. The proposed approach detects more fraudulent transactions than similar studies or reports on the same dataset.