Unsupervised Statistical Tools for Anomaly Detection:

The Case of Healthcare Frauds

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The research is motivated by the increased interest in detecting possible frauds in healthcare systems. We propose some unsupervised statistical tools (Lorenz curve, concentration function, sum of ranks, Gini and Pietra indices) to provide efficient and easy-to-use methods aimed to signal possible anomalous behaviours. A more sophisticated method, based on Bayesian co-clustering, is presented as well.