

Multivariate Anomaly Detection: Evaluating Isolation Forest  
(Technical Report)

Regulating Financial Institutions: Different for FinTechs  
(STS Research Paper)

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by

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## **Preface**

Innovations in the financial services sector have introduced new opportunities and new hazards.

Isolation Forest may prevent multidimensional abnormalities in Credit Bureau data. Such anomalies complicate credit evaluations, risking costly errors for credit card issuers. With sampled bureau data, the technique was evaluated as a means of detecting anomalies in monthly datasets. While the algorithm found outliers within each month, it did not detect the desired multivariate anomalies. Despite isolation forest's failure, evaluating other anomaly detection methods may yield a solution to this issue.

In the U.S., FinTech firms, traditional banks, their clients, and regulators compete to influence FinTech regulations. To enlist support, each associates its business interests with broader values, particularly opportunity, fairness, and security. To defend the comparatively unrestrictive regulations they enjoy, FinTechs cite the opportunities they offer. Conversely, to demand the stricter regulations they favor, traditional banks invoke banking fairness and financial security. FinTech customers seek a balance of security and convenience.