Fraud Analytics Using Descriptive, Predictive, And Social Network Techniques: A Guide To Data Science For Fraud Detection (Wiley And SAS Business Series)
Synopsis

Detect fraud earlier to mitigate loss and prevent cascading damage Fraud Analytics Using Descriptive, Predictive, and Social Network Techniques is an authoritative guidebook for setting up a comprehensive fraud detection analytics solution. Early detection is a key factor in mitigating fraud damage, but it involves more specialized techniques than detecting fraud at the more advanced stages. This invaluable guide details both the theory and technical aspects of these techniques, and provides expert insight into streamlining implementation. Coverage includes data gathering, preprocessing, model building, and post-implementation, with comprehensive guidance on various learning techniques and the data types utilized by each. These techniques are effective for fraud detection across industry boundaries, including applications in insurance fraud, credit card fraud, anti-money laundering, healthcare fraud, telecommunications fraud, click fraud, tax evasion, and more, giving you a highly practical framework for fraud prevention. It is estimated that a typical organization loses about 5% of its revenue to fraud every year. More effective fraud detection is possible, and this book describes the various analytical techniques your organization must implement to put a stop to the revenue leak. Examine fraud patterns in historical data Utilize labeled, unlabeled, and networked data Detect fraud before the damage cascades Reduce losses, increase recovery, and tighten security The longer fraud is allowed to go on, the more harm it causes. It expands exponentially, sending ripples of damage throughout the organization, and becomes more and more complex to track, stop, and reverse. Fraud prevention relies on early and effective fraud detection, enabled by the techniques discussed here. Fraud Analytics Using Descriptive, Predictive, and Social Network Techniques helps you stop fraud in its tracks, and eliminate the opportunities for future occurrence.

Book Information

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Customer Reviews

I work as a Data Scientist for a government organisation in the field of law enforcement. This is the best book I read so far targeted to practitioners in fraud detection and prevention using Big Data. It is very well written, and contains both chapters on predictive datamodelling and on social network analysis. And the way these both techniques can be combined to predict fraud. I specially liked the chapter on Social Network Analysis. It is applicable in my field, with networks containing both possible fraudulent companies and individuals responsible for the behaviour of the companies they are involved in as employers. The book contains a very practical chapter on descriptive analysis and the way outliers can be analysed to discover possible fraudulent subjects. I enjoyed the chapter about post-processing. In my organisation we are still finding out what is the best way to evaluate the strength of our predictive models, and this chapter is very helpful. It gives for example advice how to backtest a model which is already used in practice. The book is written in a way that people without a heavy mathematical background can understand it. At the same time it is challenging and introducing a lot of the latest techniques in the field of fraud detection. I recommend this book to everybody who is interested in making sense of big datasets to discover fraud. The next editions deserves a colour print in my opinion.

I've written reviews for several books on , and not until I reviewed this book were any of my reviews ever rejected. This is my second attempt to review this book. Contrary to the review by Gerard Meester (who from his dearth profile appears may have an affiliation with one or more of the authors), this is far from "the best book" available to practitioners in fraud detection and prevention using Big Data. The best book in this area is hands down Financial Forensics Body of Knowledge (Wiley Finance), which covers hundreds of analytical techniques for fraud detection in a manner understandable to most people with a modicum of education. To its credit, the book does cover some rather esoteric statistical fraud detection methods not covered in other texts, but it provides only brief coverage of these advanced statistical techniques, apparently for those already learned in the data sciences. To its detriment, the book does not provide a clear presentation of the application of the advanced formulae in a manner that is understandable to the uninitiated. It would be very nice to
see the authors provide this material in a manner that is more detailed so that the reader can work through the methods without the need to resort to the plethora of references at the end of each chapter in order to gain an understanding of the material.

Great book!

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