Detection And Prevention Of Sql Injection Attacks

In today's world, SQL Injection is a serious security threat over the Internet for the various dynamic web applications residing over the internet. These Web applications conduct many vital processes in various web-based businesses. As the use of internet for various online services is rising, so is the security threats present in the web increasing. There is a universal need present for all dynamic web applications and this universal need is the need to store, retrieve or manipulate information from a database. Most of systems which manage the databases and its requirements such as MySQL Server and PostgreSQL use SQL as their language. Flexibility of SQL makes it a powerful language. It allows its users to ask what he/she wants without leaking any information about how the data will be fetched. However the vast use of SQL based databases has made it the center of attention of hackers. They take advantage of the poorly coded Web applications to attack the databases. They introduce an apparent SQL query, through an unauthorized user input, into the legitimate query statement. In this paper, we have tried to present a comprehensive review of all the different types of SQL injection attacks present, as well as detection of such attacks and preventive measure used. We have highlighted their individual strengths and weaknesses. Such a classification would help other researchers to choose the right technique for further studies.

SQL in a Nutshell applies the eminently useful "Nutshell" format to Structured Query Language (SQL), the elegant--but complex--descriptive language that is used to create and manipulate large stores of data. For SQL programmers, analysts, and database administrators, the new second edition of SQL in a Nutshell is the essential date language reference for the world's top SQL database products. SQL in a Nutshell is a lean, focused, and thoroughly comprehensive reference for those who live in a deadline-driven world.This invaluable desktop quick reference drills down and documents every SQL command and how to use it in both commercial (Oracle, DB2, and Microsoft SQL Server) and open source implementations (PostgreSQL, and MySQL). It describes every command and reference and includes the command syntax (by vendor, if the syntax differs across implementations), a clear description, and practical examples that illustrate important concepts and uses. And it also explains how the leading commercial and open sources database product implement SQL. This wealth of information is packed into a succinct, comprehensive, and extraordinarily easy-to-use format that covers the SQL syntax of no less than 4 different databases.When you need fast, accurate, detailed, and up-to-date SQL information, SQL in a Nutshell, Second Edition will be the quick reference you'll reach for every time. SQL in a Nutshell is small enough to keep by your keyboard, and concise (as well as clearly organized) enough that you can look up the syntax you need quickly without having to wade through a lot of useless fluff. You won't want to work on a project involving SQL without it.

The world is experiencing an unprecedented period of change and growth through all the electronic and technilogical developments and everyone on the planet has been impacted. What was once ‘science fiction’, today it is a reality. This book explores the world of many of once unthinkable advancements by explaining current technologies in great detail. Each chapter focuses on a different aspect - Machine Vision, Pattern Analysis and Image Processing - Advanced Trends in Computational Intelligence and Data Analytics - Futuristic Communication Technologies - Disruptive Technologies for Future Sustainability. The chapters include the list of topics that spans all the areas of smart intelligent systems and computing such as: Data Mining with Soft Computing, Evolutionary Computing, Quantum Computing, Expert Systems, Next Generation Communication, Blockchain and Trust Management, Intelligent Biometrics, Multi-Valued Logical Systems, Cloud Computing and security etc. An extensive list of bibliographic references at the end of each chapter guides the reader to probe further into application area of interest to him/her.

This book constitutes revised selected papers from the International Conference on Advanced Computing, Networking and Security, ADCONS 2011, held in Surathkal, India, in December 2011. The 73 papers included in this book were carefully reviewed and selected from 289 submissions. The papers are organized in topical sections on distributed computing, image processing, pattern recognition, applied algorithms, wireless networking, sensor networks, network infrastructure, cryptography, Web security, and application security.

This volume is the second part of a four-volume set (CCIS 190, CCIS 191, CCIS 192, CCIS 193), which constitutes the refereed proceedings of the First International Conference on Computing and Communications, ACC 2011, held in Kochi, India, in July 2011. The 72 revised full papers presented in this volume were carefully reviewed and selected from a large number of submissions. The papers are organized in topical sections on database and information systems; distributed software development; human computer interaction and interface; ICT; internet and Web computing; mobile computing; multi agent systems; multimedia and video systems; parallel and distributed algorithms; security, trust and privacy.

SpringerBriefs present concise summaries of cutting-edge research and practical applications across a wide spectrum of fields. Featuring compact volumes of 50 to 100 pages (approximately 20,000- 40,000 words), the series covers a range of content from professional to academic. Briefs allow authors to present their ideas and readers to absorb them with minimal time investment. As part of Springer’s eBook collection, SpringBriefs are published to millions of users worldwide. Information/Data Leakage poses a serious threat to companies and organizations, as the number of leakage incidents and the cost they inflict continues to increase. Whether caused by malicious intent, or an inadvertent mistake, data loss can diminish a company’s brand, reduce shareholder value, and damage the company’s goodwill and reputation. This book aims to provide a structural and comprehensive overview of the practical solutions and current research in the DLP domain. This is the first comprehensive book that is dedicated entirely to the field of data leakage and covers all important challenges and techniques to mitigate them. Its informative, factual pages will provide researchers, students and practitioners in the industry with a comprehensive, yet concise and convenient reference source to this fascinating field. We have grouped existing solutions into different categories based on a described taxonomy. The presented taxonomy characterizes DLP solutions according to various aspects such as: leakage source, data state, leakage channel, deployment scheme, preventive/detective approaches, and the action upon leakage. In the commercial part we review solutions of the leading DLP market players based on professional research reports and material obtained from the websites of the vendors. In the academic part we cluster the academic work according to the nature of the leakage and protection into various categories. Finally, we describe main data leakage scenarios and present for each scenario the most relevant and applicable solution or approach that will mitigate and reduce the likelihood and/or impact of the leakage scenario.

Intrusion Prevention and Active Response provides an introduction to the field of Intrusion Prevention and provides detailed information on various IPS methods and technologies. Specific methods are covered in depth, including both network and host IPS and response technologies such as port deactivation, firewall/router network layer ACL modification, session sniping, outright application layer data modification, system call interception, and application shims. Corporate spending for Intrusion Prevention systems increased dramatically by 11% in the last quarter of 2004 alone Lead author, Michael Rash, is well respected in the IPS Community, having authored FWSnort, which greatly enhances the intrusion prevention capabilities of the market-leading Snort IDS

Learn to exploit vulnerable database applications using SQL injection tools and techniques, while understanding how to effectively prevent attacks Key Features Understand SQL injection and its effects on websites and other systems Get hands-on with SQL injection using both manual and automated tools Explore practical tips for various attack and defense strategies relating to SQL injection Book Description SQL injection (SQLi) is probably the most infamous attack that can be unleashed against applications on the internet. SQL Injection Strategies is an end-to-end guide for beginners looking to learn how to

perform SQL injection and test the security of web applications, websites, or databases, using both manual and automated techniques. The book serves as both a theoretical and practical guide to take you through the important aspects of SQL injection, both from an attack and a defense perspective. You'll start with a thorough introduction to SQL injection and its impact on websites and systems. Later, the book features steps to configure a virtual environment, so you can try SQL injection techniques safely on your own computer. These tests can be performed not only on web applications but also on web services and mobile applications that can be used for managing IoT environments. Tools such as sqlmap and others are then covered, helping you understand how to use them effectively to perform SQL injection attacks. By the end of this book, you will be well-versed with SQL injection, from both the attack and defense perspective. What you will learn Focus on how to defend against SQL injection attacks Understand web application security Get up and running with a variety of SQL injection concepts Become well-versed with different SQL injection scenarios Discover SQL injection manual attack techniques Delve into SQL injection automated techniques Who this book is for This book is ideal for penetration testers, ethical hackers, or anyone who wants to learn about SQL injection and the various attack and defense strategies against this web security vulnerability. No prior knowledge of SQL injection is needed to get started with this book.

Covers topics such as the importance of secure systems, threat modeling, canonical representation issues, solving database input, denial-of-service attacks, and security code reviews and checklists.

Web sites are dynamic, static, and most of the time a combination of both. Web sites needs to protect their databases to assure security. An SQL injection attacks interactive web applications that provide database services. These applications take user inputs and use them to create an SQL query at run time. In an SQL injection attack, an attacker might insert a malicious crafted SQL query as input to perform an unauthorized database operation. Using SQL injection attacks, an attacker can retrieve, modify or can delete confidential sensitive information from the database. It may jeopardize the confidentiality, trust and security of Web sites which totally depends on databases. This report presents a "code reengineering" that implicitly protects the web applications from SQL injection attacks. It uses an original approach that combines static as well as dynamic analysis. In this report, I mentioned an automated technique for moving out SQL injection vulnerabilities from Java code by converting plain text inputs received from users into prepared statements.

Rigorously test and improve the security of all your Web software! It's as certain as death and taxes: hackers will mercilessly attack your Web sites, applications, and services. If you're vulnerable, you'd better discover these attacks yourself, before the black hats do. Now, there's a definitive, hands-on guide to security-testing any Web-based software: How to Break Web Software. In this book, two renowned experts address every category of Web software exploit: attacks on clients, servers, state, user inputs, and more. You'll master powerful attack tools and techniques as you uncover dozens of crucial, widely exploited flaws in Web architecture and coding. The authors reveal where to look for potential threats and attack vectors, how to rigorously test for each of them, and how to mitigate the problems you find. Coverage includes · Client vulnerabilities, including attacks on client-side validation · State-based attacks: hidden fields, CGI parameters, cookie poisoning, URL jumping, and session hijacking · Attacks on user-supplied inputs: cross-site scripting, SQL injection, and directory traversal · Language- and technology-based attacks: buffer overflows, canonicalization, and NULL string attacks · Server attacks: SQL Injection with stored procedures, command injection, and server fingerprinting · Cryptography, privacy, and attacks on Web services Your Web software is mission-critical–it can't be compromised. Whether you're a developer, tester, QA specialist, or IT manager, this book will help you protect that software–systematically.

This book includes high-quality research papers presented at the Third International Conference on Innovative Computing and Communication (ICICC 2020), which is held at the Shaheed Sukhdev College of Business Studies, University of Delhi, Delhi, India, on 21-23 February, 2020. Introducing the innovative works of scientists, professors, research scholars, students and industrial experts in the field of computing and communication, the book promotes the transformation of fundamental research into institutional and industrialized research and the conversion of applied exploration into real-time applications.

This book presents the proceedings of the 5th International Conference on Advanced Intelligent Systems and Informatics 2019 (AISI2019), which took place in Cairo, Egypt, from October 26 to 28, 2019. This international and interdisciplinary conference, which highlighted essential research and developments in the fields of informatics and intelligent systems, was organized by the Scientific Research Group in Egypt (SRGE). The book is divided into several sections, covering the following topics: machine learning and applications, swarm optimization and applications, robotic and control systems, sentiment analysis, e-learning and social media education, machine and deep learning algorithms, recognition and image processing, intelligent systems and applications, mobile computing and networking, cyber-physical systems and security, smart grids and renewable energy, and micro-grid and power systems.

This book captures the state of the art research in the area of malicious code detection, prevention and mitigation. It contains cutting-edge behavior-based techniques to analyze and detect obfuscated malware. The book analyzes current trends in malware activity online, including botnets and malicious code for profit, and it proposes effective models for detection and prevention of attacks using. Furthermore, the book introduces novel techniques for creating services that protect their own integrity and safety, plus the data they manage.

"Practical Intrusion Analysis provides a solid fundamental overview of the art and science of intrusion analysis." –Nate Miller, Cofounder, Stratum Security The Only Definitive Guide to New State-of-the-Art Techniques in Intrusion Detection and Prevention Recently, powerful innovations in intrusion detection and prevention have evolved in response to emerging threats and changing business environments. However, security practitioners have found little reliable, usable information about these new IDS/IPS technologies. In Practical Intrusion Analysis, one of the field's leading experts brings together these innovations for the first time and demonstrates how they can be used to analyze attacks, mitigate damage, and track attackers. Ryan Trost reviews the fundamental techniques and business drivers of intrusion detection and prevention by analyzing today's new vulnerabilities and attack vectors. Next, he presents complete explanations of powerful new IDS/IPS methodologies based on Network Behavioral Analysis (NBA), data visualization, geospatial analysis, and more. Writing for security practitioners and managers at all experience levels, Trost introduces new solutions for virtually every environment. Coverage includes Assessing the strengths and limitations of mainstream monitoring tools and IDS technologies Using Attack Graphs to map paths of network vulnerability and becoming more proactive about preventing intrusions Analyzing network behavior to immediately detect polymorphic worms, zero-day exploits, and botnet DoS attacks Understanding the theory, advantages, and disadvantages of the latest Web Application Firewalls Implementing IDS/IPS systems that protect wireless data traffic Enhancing your intrusion detection efforts by converging with physical security defenses Identifying attackers' "geographical fingerprints" and using that information to respond more effectively Visualizing data traffic to identify suspicious patterns more quickly Revisiting intrusion detection ROI in light of new threats, compliance risks, and technical alternatives Includes contributions from these leading network security experts: Jeff Forristal, a.k.a. Rain Forest Puppy, senior security professional and creator of libwhisker Seth Fogie, CEO, Airscanner USA; leading-edge mobile security researcher; coauthor of Security Warrior Dr. Sushil Jajodia, Director, Center for Secure Information Systems; founding Editor-in-Chief, Journal of Computer Security Dr. Steven Noel, Associate Director and Senior Research Scientist, Center for Secure Information Systems, George Mason University Alex Kirk, Member, Sourcefire Vulnerability Research Team

Take a deep dive into the many uses of dynamic SQL in Microsoft SQL Server. This edition has been updated to use the newest features in SQL Server 2016 and SQL Server 2017 as well as incorporating the changing landscape of analytics and database administration. Code examples have been updated with new system objects and functions to improve efficiency and maintainability. Executing dynamic SQL

is key to large-scale searching based on user-entered criteria. Dynamic SQL can generate lists of values and even code with minimal impact on performance. Dynamic SQL enables dynamic pivoting of data for business intelligence solutions as well as customizing of database objects. Yet dynamic SQL is feared by many due to concerns over SQL injection or code maintainability. Dynamic SQL: Applications, Performance, and Security in Microsoft SQL Server helps you bring the productivity and user-satisfaction of flexible and responsive applications to your organization safely and securely. Your organization's increased ability to respond to rapidly changing business scenarios will build competitive advantage in an increasingly crowded and competitive global marketplace. With a focus on new applications and modern database architecture, this edition illustrates that dynamic SQL continues to evolve and be a valuable tool for administration, performance optimization, and analytics. What You'ill Learn Build flexible applications that respond to changing business needs Take advantage of creative, innovative, and productive uses of dynamic SQL Know about SQL injection and be confident in your defenses against it Address performance concerns in stored procedures and dynamic SQL Troubleshoot and debug dynamic SQL to ensure correct results Automate your administration of features within SQL Server Who This Book is For Developers and database administrators looking to hone and build their T-SQL coding skills. The book is ideal for developers wanting to plumb the depths of application flexibility and troubleshoot performance issues involving dynamic SQL. The book is also ideal for programmers wanting to learn what dynamic SQL is about and how it can help them deliver competitive advantage to their organizations.
Computer application, Network Security and Cryptography, Pattern Analysis and Machine Intelligence Intelligent Databases and Information Retrieval, Image Processing, Wireless Sensor Network, Computational Biology and Bioinformatics
A cross site scripting attack is a very specific type of attack on a web application. It is used by hackers to mimic real sites and fool people into providing personal data. XSS Attacks starts by defining the terms and laying out the ground work. It assumes that the reader is familiar with basic web programming (HTML) and JavaScript. First it discusses the concepts, methodology, and technology that makes XSS a valid concern. It then moves into the various types of XSS attacks, how they are implemented, used, and abused. After XSS is thoroughly explored, the next part provides examples of XSS malware and demonstrates real cases where XSS is a dangerous risk that exposes internet users to remote access, sensitive data theft, and monetary losses. Finally, the book closes by examining the ways developers can avoid XSS vulnerabilities in their web applications, and how users can avoid becoming a victim. The audience is web developers, security practitioners, and managers. XSS Vulnerabilities exist in 8 out of 10 Web sites The authors of this book are the undisputed industry leading authorities Contains independent, bleeding edge research, code listings and exploits that can not be found anywhere else
A lot of research has gone into eliminating SQL Injection attacks over the past decade and yet it is one of the most prevalent web based attacked harming commerce as well as privacy today. This is a clear indicator that we need to look deeper than just the network and application layer to consolidate security recommendations and practices into the core of any application - its data layer.
Injection attacks top the list of Open Web Application Security Project's Top 10 Application Security Risks almost every year. SQL Injection is one such attack that presents the adversaries an opportunity to access Personally Identifiable Information (PII) and commit identity theft, putting breach victims at risk. Any data that could potentially be utilized to identify a particular person could be classified as PII. Passport number, social security number, bank account number, driver's license number, and email address are all good examples of PII. Intrusion detection and prevention system is a system or software application that continuously monitors a network for possible malicious activity or policy violations. The alerts and logs generated are typically reviewed by the administrator or SIEM. A signature-based IDS relies on predefined signatures to detect an attack. The signatures used are usually released periodically by the company who owns the IDS software or by the admin herself. Writing these signatures manually or waiting on the releases of new rules can take up significant time, effort and knowledge. In this thesis, a system is developed that monitors traffic in real time, performs deep packet inspection on each incoming packet and looks for possible SQLI patterns to form rules in Snort (IDS) database. Once the system finds a possible SQLI pattern, it saves the attacker's IP to a blacklist for the admin to review later. If the attacker continues to pass such attack patterns, the IP is blacklisted and the access to that specific user is blocked. Our proposed system, ScorPi increases the baseline intrusion detection performance by 4.7x, with only 23% of the resources required by the baseline, while performing in the order of a few milliseconds, suitable for real-time edge networks.
This book is intended to present the state of the art in research on machine learning and big data analytics. The accepted chapters covered many themes including artificial intelligence and data mining applications, machine learning and applications, deep learning technology for big data analytics, and modeling, simulation, and security with big data. It is a valuable resource for researchers in the area of big data analytics and its applications.
This book presents recent advances in the field of distributed computing and machine learning, along with cutting-edge research in the field of Internet of Things (IoT) and blockchain in distributed environments. It features selected high-quality research papers from the First International Conference on Advances in Distributed Computing and Machine Learning (ICADCML 2020), organized by the School of Information Technology and Engineering, VIT, Vellore, India, and held on 30–31 January 2020.
This book is an introduction and deep-dive into the many uses of dynamic SQL in Microsoft SQL Server. Dynamic SQL is key to large-scale searching based upon user-entered criteria. It's also useful in generating value-lists, in dynamic pivoting of data for business intelligence reporting, and for customizing database objects and querying their structure. Executing dynamic SQL is at the heart of applications such as business intelligence dashboards that need to be fluid and respond instantly to changing user needs as those users explore their data and view the results. Yet dynamic SQL is feared by many due to concerns over SQL injection attacks. Reading Dynamic SQL: Applications, Performance, and Security is your opportunity to learn and master an often misunderstood feature, including security and SQL injection. All aspects of security relevant to dynamic SQL are discussed in this book. You will learn many ways to save time and develop code more efficiently, and you will practice directly with security scenarios that threaten companies around the world every day. Dynamic SQL: Applications, Performance, and Security helps you bring the productivity and user-satisfaction of flexible and responsive applications to your organization safely and securely. Your organization's increased ability to respond to rapidly changing business scenarios will build competitive advantage in an increasingly crowded and competitive global marketplace. Discusses many applications of dynamic SQL, both simple and complex. Explains each example with demos that can be run at home and on your laptop. Helps you to identify when dynamic SQL can offer superior performance. Pays attention to security and best practices to ensure safety of your data. What You Will Learn Build flexible applications that respond fast to changing business needs. Take advantage of unconventional but productive uses of dynamic SQL. Protect your data from attack through best-practices in your implementations. Know about SQL Injection and be confident in your defenses against it Run at high performance by optimizing dynamic SQL in your applications. Troubleshoot and debug dynamic SQL to ensure correct results. Who This Book is For Dynamic SQL: Applications, Performance, and Security is for developers and database administrators looking to hone and build their T-SQL coding skills. The book is ideal for advanced users wanting to plumb the depths of application flexibility and troubleshoot performance issues involving dynamic SQL. The book is also ideal for beginners wanting to learn what dynamic SQL is about and how it can help them deliver competitive advantage to their organizations.
This book constitutes the refereed proceedings of the 14th International Conference on Advanced Data Mining and Applications, ADMA 2018, held in Nanjing, China in November 2018. The 23 full and 22 short papers presented in this volume were carefully reviewed and selected from 104 submissions. The papers were organized in topical sections named: Data Mining Foundations; Big Data; Text and

Multimedia Mining; Miscellaneous Topics.

What is SQL injection? -- Testing for SQL injection -- Reviewing code for SQL injection -- Exploiting SQL injection -- Blind SQL injection exploitation -- Exploiting the operating system -- Advanced topics -- Code-level defenses -- Platform level defenses -- Confirming and recovering from SQL injection attacks -- References.

This volume contains 73 papers presented at CSI 2014: Emerging ICT for Bridging the Future: Proceedings of the 49th Annual Convention of Computer Society of India. The convention was held during 12-14, December, 2014 at Hyderabad, Telangana, India. This volume contains papers mainly focused on Fuzzy Systems, Image Processing, Software Engineering, Cyber Security and Digital Forensic, E-Commerce, Big Data, Cloud Computing and ICT applications.

This book constitutes the refereed proceedings of the 5th International Conference on Information Processing, ICIP 2011, held in Bangalore, India, in August 2011. The 86 revised full papers presented were carefully reviewed and selected from 514 submissions. The papers are organized in topical sections on data mining; Web mining; artificial intelligence; soft computing; software engineering; computer communication networks; wireless networks; distributed systems and storage networks; signal processing; image processing and pattern recognition.

Basics of SQL Injection Analysis, Detection and PreventionWeb SecurityLAP Lambert Academic Publishing

This book presents high-quality papers from the Third International Conference on Smart Computing and Informatics (SCI 2018?19), organized by the School of Computer Engineering and School of Computer Application, Kalinga Institute of Industrial Technology Deemed to be University, Bhubaneswar, from 21 to 22 December 2018. It includes advanced and multi-disciplinary research on the design of smart computing and informatics, focusing on innovation paradigms in system knowledge, intelligence and sustainability that have the potential to provide realistic solutions to various problems in society, the environment and industry. The papers featured provide a valuable contribution to the deployment of emerging computational and knowledge transfer approaches, optimizing solutions in varied disciplines of science, technology and health care.

"Creating channels with application programming interfaces"--Cover.

The volume contains 75 papers presented at International Conference on Communication and Networks (COMNET 2015) held during February 19–20, 2016 at Ahmedabad Management Association (AMA), Ahmedabad, India and organized by Computer Society of India (CSI), Ahmedabad Chapter, Division IV and Association of Computing Machinery (ACM), Ahmedabad Chapter. The book aims to provide a forum to researchers to propose theory and technology on the networks and services, share their experience in IT and telecommunications industries and to discuss future management solutions for communication systems, networks and services. It comprises of original contributions from researchers describing their original, unpublished, research contribution. The papers are mainly from 4 areas – Security, Management and Control, Protocol and Deployment, and Applications. The topics covered in the book are newly emerging algorithms, communication systems, network standards, services, and applications.

The two-volume set CCIS 827 and 828 constitutes the thoroughly refereed proceedings of the Third International Conference on Next Generation Computing Technologies, NGCT 2017, held in Dehradun, India, in October 2017. The 135 full papers presented were carefully reviewed and selected from 948 submissions. There were organized in topical sections named: Smart and Innovative Trends in Communication Protocols and Standards; Smart and Innovative Trends in Computational Intelligence and Data Science; Smart and Innovative Trends in Image Processing and Machine Vision; Smart Innovative Trends in Natural Language Processing for Indian Languages; Smart Innovative Trends in Security and Privacy.

Detect fraud faster—no matter how well hidden—with IDEA automation Fraud and Fraud Detection takes an advanced approach to fraud management, providing step-by-step guidance on automating detection and forensics using CaseWare's IDEA software. The book begins by reviewing the major types of fraud, then details the specific computerized tests that can detect them. Readers will learn to use complex data analysis techniques, including automation scripts, allowing easier and more sensitive detection of anomalies that require further review. The companion website provides access to a demo version of IDEA, along with sample scripts that allow readers to immediately test the procedures from the book. Business systems' electronic databases have grown tremendously with the rise of big data, and will continue to increase at significant rates. Fraudulent transactions are easily hidden in these enormous datasets, but Fraud and Fraud Detection helps readers gain the data analytics skills that can bring these anomalies to light. Step-by-step instruction and practical advice provide the specific abilities that will enhance the audit and investigation process. Readers will learn to: Understand the different areas of fraud and their specific detection methods Identify anomalies and risk areas using computerized techniques Develop a step-by-step plan for detecting fraud through data analytics Utilize IDEA software to automate detection and identification procedures The delineation of detection techniques for each type of fraud makes this book a must-have for students and new fraud prevention professionals, and the step-by-step guidance to automation and complex analytics will prove useful for even experienced examiners. With datasets growing exponentially, increasing both the speed and sensitivity of detection helps fraud professionals stay ahead of the game. Fraud and Fraud Detection is a guide to more efficient, more effective fraud identification.

This book constitutes the refereed proceedings of the 6th International Conference on Detection of Intrusions and Malware, and Vulnerability Assessment, DIMVA 2009, held in Milan, Italy, in July 2009. The 10 revised full papers presented together with three extended abstracts were carefully selected from 44 initial submissions. The papers are organized in topical sections on malware and SPAM, emulation-based detection, software diversity, harnessing context, and anomaly detection.

The 9 th International Conference on System Modeling & Advancement in Research Trends (SMART) will bring together leading researchers, engineers and scientists in the domain of interest from around the world by providing a platform to present new advances and research results in the fields of Computational Sciences, system modeling and computer science Moradabad is a city in Uttar Pradesh state of India

This two volume set LNCS 10602 and LNCS 10603 constitutes the thoroughly refereed post-conference proceedings of the Third International Conference on Cloud Computing and Security, ICCCS 2017, held in Nanjing, China, in June 2017. The 116 full papers and 11 short papers of these volumes were carefully reviewed and selected from 391 submissions. The papers are organized in topical sections such as: information hiding; cloud computing; IOT applications; information security; multimedia applications; optimization and classification.

The 4-volume set LNCS 11632 until LNCS 11635 constitutes the refereed proceedings of the 5th International Conference on Artificial Intelligence and Security, ICAIS 2019, which was held in New York, USA, in July 2019. The conference was formerly called “International Conference on Cloud Computing and Security” with the acronym ICCCS. The total of 230 full papers presented in this 4-volume proceedings was carefully reviewed and selected from 1529 submissions. The papers were organized in topical sections as follows: Part I: cloud computing; Part II: artificial intelligence; big data; and cloud computing and security; Part III: cloud computing and security; information hiding; IoT security; multimedia forensics; and encryption and cybersecurity; Part IV: encryption and cybersecurity.