



# Data Mining and Machine Learning in Cybersecurity

By Sumeet Dua, Sumeet

Download now

Read Online ➔

**Data Mining and Machine Learning in Cybersecurity** By Sumeet Dua, Sumeet

With the rapid advancement of information discovery techniques, machine learning and data mining continue to play a significant role in cybersecurity. Although several conferences, workshops, and journals focus on the fragmented research topics in this area, there has been no single interdisciplinary resource on past and current works and possible paths for future research in this area. This book fills this need.

From basic concepts in machine learning and data mining to advanced problems in the machine learning domain, **Data Mining and Machine Learning in Cybersecurity** provides a unified reference for specific machine learning solutions to cybersecurity problems. It supplies a foundation in cybersecurity fundamentals and surveys contemporary challenges—detailing cutting-edge machine learning and data mining techniques. It also:

- Unveils cutting-edge techniques for detecting new attacks
- Contains in-depth discussions of machine learning solutions to detection problems
- Categorizes methods for detecting, scanning, and profiling intrusions and anomalies
- Surveys contemporary cybersecurity problems and unveils state-of-the-art machine learning and data mining solutions
- Details privacy-preserving data mining methods

This interdisciplinary resource includes technique review tables that allow for speedy access to common cybersecurity problems and associated data mining methods. Numerous illustrative figures help readers visualize the workflow of complex techniques and more than forty case studies provide a clear understanding of the design and application of data mining and machine learning techniques in cybersecurity.

 [Download Data Mining and Machine Learning in Cybersecurity ...pdf](#)

 [Read Online Data Mining and Machine Learning in Cybersecurit ...pdf](#)

# Data Mining and Machine Learning in Cybersecurity

*By Sumeet Dua, Sumeet*

**Data Mining and Machine Learning in Cybersecurity** By Sumeet Dua, Sumeet

With the rapid advancement of information discovery techniques, machine learning and data mining continue to play a significant role in cybersecurity. Although several conferences, workshops, and journals focus on the fragmented research topics in this area, there has been no single interdisciplinary resource on past and current works and possible paths for future research in this area. This book fills this need.

From basic concepts in machine learning and data mining to advanced problems in the machine learning domain, **Data Mining and Machine Learning in Cybersecurity** provides a unified reference for specific machine learning solutions to cybersecurity problems. It supplies a foundation in cybersecurity fundamentals and surveys contemporary challenges—detailing cutting-edge machine learning and data mining techniques. It also:

- Unveils cutting-edge techniques for detecting new attacks
- Contains in-depth discussions of machine learning solutions to detection problems
- Categorizes methods for detecting, scanning, and profiling intrusions and anomalies
- Surveys contemporary cybersecurity problems and unveils state-of-the-art machine learning and data mining solutions
- Details privacy-preserving data mining methods

This interdisciplinary resource includes technique review tables that allow for speedy access to common cybersecurity problems and associated data mining methods. Numerous illustrative figures help readers visualize the workflow of complex techniques and more than forty case studies provide a clear understanding of the design and application of data mining and machine learning techniques in cybersecurity.

**Data Mining and Machine Learning in Cybersecurity** By Sumeet Dua, Sumeet Bibliography

- Rank: #637703 in eBooks

- Published on: 2011-12-19
- Released on: 2011-12-19
- Format: Kindle eBook

 [Download Data Mining and Machine Learning in Cybersecurity ...pdf](#)

 [Read Online Data Mining and Machine Learning in Cybersecurit ...pdf](#)

## **Editorial Review**

### About the Author

**Dr. Sumeet Dua** is currently an upchurch endowed associate professor and the coordinator of IT research at Louisiana Tech University, Ruston, USA. He received his PhD in computer science from Louisiana State University, Baton Rouge, Louisiana.

His areas of expertise include data mining, image processing and computational decision support, pattern recognition, data warehousing, biomedical informatics, and heterogeneous distributed data integration. The National Science Foundation (NSF), the National Institutes of Health (NIH), the Air Force Research Laboratory (AFRL), the Air Force Office of Sponsored Research (AFOSR), the National Aeronautics and Space Administration (NASA), and the Louisiana Board of Regents (LA-BoR) have funded his research with over \$2.8 million. He frequently serves as a study section member (expert panelist) for the National Institutes of Health (NIH) and panelist for the National Science Foundation (NSF)/CISE Directorate. Dr. Dua has chaired several conference sessions in the area of data mining and is the program chair for the *Fifth International Conference on Information Systems, Technology, and Management (ICISTM-2011)*. He has given more than 26 invited talks on data mining and its applications at international academic and industry arenas, has advised more than 25 graduate theses, and currently advises several graduate students in the discipline. Dr. Dua is a coinventor of two issued U.S. patents, has (co-)authored more than 50 publications and book chapters, and has authored or edited four books. Dr. Dua has received the Engineering and Science Foundation Award for Faculty Excellence (2006) and the Faculty Research Recognition Award (2007), has been recognized as a distinguished researcher (2004–2010) by the Louisiana Biomedical Research Network (NIH-sponsored), and has won the Outstanding Poster Award at the NIH/NCI caBIG—NCRI Informatics Joint Conference; Biomedical Informatics without Borders: From Collaboration to Implementation. Dr. Dua is a senior member of the IEEE Computer Society, a senior member of the ACM, and a member of SPIE and the American Association for Advancement of Science.

**Dr. Xian Du** is a research associate and postdoctoral fellow at Louisiana Tech University, Ruston, USA. He worked as a postdoctoral researcher at the Centre National de la Recherche Scientifique (CNRS) in the CREATIS Lab, Lyon, France, from 2007 to 2008 and served as a software engineer in Kikuze Solutions Pte. Ltd., Singapore, in 2006. He received his PhD from the Singapore–MIT Alliance (SMA) Programme at the National University of Singapore in 2006.

Dr. Xian Du's current research focus is on high-performance computing using machine-learning and data-mining technologies, data-mining applications for cybersecurity, software in multiple computer operational environments, and clustering theoretical research. He has broad experience in machine-learning applications in industry and academic research at high-level research institutes. During his work in the CREATIS Lab in France, he developed a 3D smooth active contour technology for knee cartilage MRI image segmentation. He led a small research and development group to develop color control plug-ins for an RGB color printer to connect to the Windows system through image processing GDI functions for Kikuze Solutions.

He helped to build an intelligent e-diagnostics system for reducing mean time to repair wire-bonding machines at National Semiconductor Ltd., Singapore (NSC). During his PhD dissertation research at the SMA, he developed an intelligent color print process control system for color printers. Dr. Du's major

research interests are machine-learning and data-mining applications, heterogeneous data integration and visualization, cybersecurity, and clustering theoretical research.

## **Users Review**

### **From reader reviews:**

#### **Melvin Wilhelm:**

What do you ponder on book? It is just for students because they are still students or this for all people in the world, what the best subject for that? Just simply you can be answered for that problem above. Every person has diverse personality and hobby for every single other. Don't to be compelled someone or something that they don't need do that. You must know how great as well as important the book Data Mining and Machine Learning in Cybersecurity. All type of book is it possible to see on many solutions. You can look for the internet sources or other social media.

#### **Jimmy Putnam:**

Your reading 6th sense will not betray you, why because this Data Mining and Machine Learning in Cybersecurity guide written by well-known writer whose to say well how to make book that may be understand by anyone who read the book. Written with good manner for you, dripping every ideas and producing skill only for eliminate your current hunger then you still uncertainty Data Mining and Machine Learning in Cybersecurity as good book not only by the cover but also by content. This is one e-book that can break don't ascertain book by its handle, so do you still needing a different sixth sense to pick this kind of!? Oh come on your reading sixth sense already said so why you have to listening to one more sixth sense.

#### **Christopher Jaeger:**

You may get this Data Mining and Machine Learning in Cybersecurity by check out the bookstore or Mall. Just viewing or reviewing it may to be your solve problem if you get difficulties for the knowledge. Kinds of this reserve are various. Not only by simply written or printed and also can you enjoy this book by means of e-book. In the modern era just like now, you just looking from your mobile phone and searching what your problem. Right now, choose your ways to get more information about your guide. It is most important to arrange you to ultimately make your knowledge are still up-date. Let's try to choose appropriate ways for you.

#### **Mildred Timm:**

Do you like reading a book? Confuse to looking for your selected book? Or your book seemed to be rare? Why so many issue for the book? But any people feel that they enjoy intended for reading. Some people likes examining, not only science book but also novel and Data Mining and Machine Learning in Cybersecurity or maybe others sources were given understanding for you. After you know how the truly great a book, you feel would like to read more and more. Science e-book was created for teacher as well as students especially. Those textbooks are helping them to add their knowledge. In different case, beside science reserve, any other book likes Data Mining and Machine Learning in Cybersecurity to make your

spare time a lot more colorful. Many types of book like this one.

**Download and Read Online Data Mining and Machine Learning in Cybersecurity By Sumeet Dua, Sumeet #HMYN3COQGLF**

# **Read Data Mining and Machine Learning in Cybersecurity By Sumeet Dua, Sumeet for online ebook**

Data Mining and Machine Learning in Cybersecurity By Sumeet Dua, Sumeet Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Data Mining and Machine Learning in Cybersecurity By Sumeet Dua, Sumeet books to read online.

## **Online Data Mining and Machine Learning in Cybersecurity By Sumeet Dua, Sumeet ebook PDF download**

### **Data Mining and Machine Learning in Cybersecurity By Sumeet Dua, Sumeet Doc**

Data Mining and Machine Learning in Cybersecurity By Sumeet Dua, Sumeet Mobipocket

Data Mining and Machine Learning in Cybersecurity By Sumeet Dua, Sumeet EPub

HMYN3COQGLF: Data Mining and Machine Learning in Cybersecurity By Sumeet Dua, Sumeet