



Malware Analysis

Author : N. Senthamilarasi, V. Subapriya, Nikitha

ISBN 13 : 978-93-55389-84-8

ISBN 10 : 9355389841

E-ISBN 13 : 978-93-55389-84-8

Edition : First

Pages : 132

Type of book : Physical

Year : 2026

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 248.00

Categories : [New Arrivals, Emerging Technologies, Book Store, Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

In today's interconnected digital landscape, the threat from malicious software is a constant and rapidly evolving challenge, capable of inflicting significant harm on individuals and organizations. MALWARE ANALYSIS is an essential guide crafted to provide a comprehensive foundation for cybersecurity specialization in both malware analysis and Operating System (OS) security. It is designed to equip students, security professionals, IT professionals, and researchers with the crucial tools and knowledge needed to identify, understand, and effectively neutralize threats in real-world environments.

The book's core value lies in its pragmatic approach, meticulously combining theoretical foundations with indispensable hands-on analysis techniques. Readers will gain an in-depth exploration of both static malware analysis (examining code without execution) and dynamic malware analysis (studying behavior during execution). The content systematically progresses from fundamental concepts of malware types—such as worms, ransomware, and rootkits—and their evolution to advanced analysis techniques. Key topics include setting up an isolated malware analysis lab, using powerful behavioral monitoring tools like Process Monitor and Wireshark, and advanced code-level debugging with tools like OLLYDBG. Furthermore, it covers advanced malware functionality like Process Injection and modern detection techniques, including signature-based, non-signature-based, and machine-learning methods. This text is an indispensable resource for mastering the skills required to safeguard digital infrastructure against emerging and complex cyber threats.

In today's interconnected digital landscape, the threat from malicious software is a constant and rapidly evolving challenge, capable of inflicting significant harm on individuals and organizations. MALWARE ANALYSIS is an essential guide crafted to provide a comprehensive foundation for cybersecurity specialization in both malware

analysis and Operating System (OS) security. It is designed to equip students, security professionals, IT professionals, and researchers with the crucial tools and knowledge needed to identify, understand, and effectively neutralize threats in real-world environments.

The book's core value lies in its pragmatic approach, meticulously combining theoretical foundations with indispensable hands-on analysis techniques. Readers will gain an in-depth exploration of both static malware analysis (examining code without execution) and dynamic malware analysis (studying behavior during execution). The content systematically progresses from fundamental concepts of malware types—such as worms, ransomware, and rootkits—and their evolution to advanced analysis techniques. Key topics include setting up an isolated malware analysis lab, using powerful behavioral monitoring tools like Process Monitor and Wireshark, and advanced code-level debugging with tools like OLLYDBG. Furthermore, it covers advanced malware functionality like Process Injection and modern detection techniques, including signature-based, non-signature-based, and machine-learning methods. This text is an indispensable resource for mastering the skills required to safeguard digital infrastructure against emerging and complex cyber threats.

Salient Features:

- **Malware Taxonomy Deep Dive:** Explores the fundamental concepts, history, and taxonomy of malicious software, including worms, ransomware, rootkits, spyware, and sophisticated Advanced Persistent Threats (APTs).
- **Static Analysis Mastery:** Provides thorough instruction on static analysis techniques, covering X86 architecture, the Portable Executable (PE) File Format, and essential concepts like Opcodes and Disassembly for code inspection.
- **Dynamic Behavior Profiling:** Details the principles of dynamic analysis, including setting up an isolated Malware Sandbox and utilizing key tools like Process Monitor and

Wireshark to observe runtime behavior and network traffic.

- **Practical Lab Setup:** Guides the reader through assembling a complete malware analysis toolkit, covering virtualization, isolation techniques, and the use of behavioral monitoring and code-analysis utilities.
- **Advanced Debugging Techniques:** Teaches practical skills in advanced code-level analysis, including kernel vs. user-mode debugging, setting Breakpoints and Tracing execution, and using debuggers like OLLYDBG.
- **Covert Malware Functionality:** Discusses sophisticated attack vectors and persistence mechanisms, such as Process Injection, Privilege Escalation, Downloaders, and Credential Stealers.
- **Detection & Evasion Tactics:** Explores contemporary techniques like signature-based, similarity-based, and Machine Learning methods for detection, alongside malware evasion tactics such as Polymorphic and Metamorphic code.
- **Integrated OS Security:** Provides fundamental context by linking malware analysis directly to OS Security concepts, including principles like integrity, confidentiality, and availability, and various system threats.
- **Malware Taxonomy Deep Dive:** Explores the fundamental concepts, history, and taxonomy of malicious software, including worms, ransomware, rootkits, spyware, and sophisticated Advanced Persistent Threats (APTs).
- **Static Analysis Mastery:** Provides thorough instruction on static analysis techniques, covering X86 architecture, the Portable Executable (PE) File Format, and essential concepts like Opcodes and Disassembly for code inspection.
- **Dynamic Behavior Profiling:** Details the principles of dynamic analysis, including setting up an isolated Malware Sandbox and utilizing key tools like Process Monitor and Wireshark to observe runtime behavior and network traffic.

- **Practical Lab Setup:** Guides the reader through assembling a complete malware analysis toolkit, covering virtualization, isolation techniques, and the use of behavioral monitoring and code-analysis utilities.
- **Advanced Debugging Techniques:** Teaches practical skills in advanced code-level analysis, including kernel vs. user-mode debugging, setting Breakpoints and Tracing execution, and using debuggers like OLLYDBG.
- **Covert Malware Functionality:** Discusses sophisticated attack vectors and persistence mechanisms, such as Process Injection, Privilege Escalation, Downloaders, and Credential Stealers.
- **Detection & Evasion Tactics:** Explores contemporary techniques like signature-based, similarity-based, and Machine Learning methods for detection, alongside malware evasion tactics such as Polymorphic and Metamorphic code.
- **Integrated OS Security:** Provides fundamental context by linking malware analysis directly to OS Security concepts, including principles like integrity, confidentiality, and availability, and various system threats.

Author

N. Senthamilarasi

N. Senthamilarasi Associate Professor, Dept of CSE, Sathyabhama Institute of Science and Technology

V. Subapriya

V. Subapriya Associate Professor, Dept of CSE, Sathyabhama Institute of Science and Technology

Nikitha



User Interface Design

Author : C. Geetha, A. Sathiyaraj

ISBN 13 : 978-93-55385-36-9

ISBN 10 : 9355385366

E-ISBN 13 : 978-93-55385-36-9

Edition : First

Pages : 140

Type of book : Physical

Year : 2026

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 248.00

Categories : [Computer Science Engineering,](#)
[New Arrivals, Book Store,](#)
[Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

This authoritative textbook, User Interface Design, is a comprehensive and practical guide dedicated to mastering the art and science of building modern, responsive, and engaging web interfaces. The book is structured around the practical application of essential front-end technologies, providing a clear path for readers to transition from foundational markup to advanced dynamic design.

The core theme revolves around the latest standards, specifically providing an in-depth exploration of HTML5 and CSS3. Readers will gain proficiency in crucial contemporary features such as semantic document structuring, rich media integration (native audio and video), client-side data persistence via Web Storage, and interactive capabilities using the Canvas API for 2D graphics. Furthermore, it covers advanced techniques like implementing Geolocation for location-aware applications and leveraging frameworks like Bootstrap for efficient, responsive layouts.

Authored by experts in Information Technology, this resource is invaluable for a broad audience: students and academics in Computer Science and Web Development seeking a strong theoretical and practical foundation, as well as aspiring and practicing web professionals looking to update their skills with current industry standards. By offering detailed code examples and focusing on practical value, the book ensures that readers can immediately apply these powerful tools to create high-performing and user-centric interfaces.

Salient Features:

- **Semantic HTML5 Mastery:** Covers new HTML5 elements like `<article>`, `<section>`, and `<header>` to help readers create a meaningful, better-structured, and more accessible document outline.

- **Rich Media Integration:** Detailed instruction on embedding and controlling native audio and video content using the `<audio>` and `<video>` tags, eliminating reliance on external plug-ins like Flash.
- **Client-Side Capabilities:** Explores powerful browser APIs, including Geolocation for location-aware apps and Web Storage for persistent, secure client-side data handling (local and session storage).
- **Dynamic Graphics Design:** Provides practical instruction on using the Canvas API with JavaScript to create programmable, two-dimensional graphics, facilitating the development of complex interactive visuals.
- **Responsive Design Frameworks:** Features a comprehensive guide to CSS3 and its advanced features, alongside the utilization of the Bootstrap framework for quickly building mobile-first and responsive web layouts.
- **Advanced Form Elements:** Focuses on HTML5 Forms 2.0, introducing new input types (like email, date, number) and attributes for improved user experience, data validation, and specialized input fields.
- **Code-Based Learning:** Emphasizes learning through direct implementation by providing numerous detailed HTML, CSS, and JavaScript code snippets with corresponding output examples for every core concept.
- **Modern Style Techniques:** Covers essential CSS3 features such as advanced selectors, text shadow effects, 2D and 3D transformations, and implementations like border-radius and box-shadow.

Author

C. Geetha

A. Sathiyaraj



R Programming

Author : S. Revathy, M.S. Roobini

ISBN 13 : 978-93-55382-28-3

ISBN 10 : 9355382286

E-ISBN 13 : 978-93-55382-28-3

Edition : First

Pages : 116

Type of book : Physical

Year : 2026

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 198.00

Categories : [Computer Science Engineering,](#)
[New Arrivals, Book Store,](#)
[Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

This comprehensive textbook, R Programming, is meticulously designed to serve as a complete, hands-on guide for mastering R, the world's most popular open-source language for statistical computing and data analysis. The book's core theme is bridging the gap between theoretical data science concepts and practical implementation, offering a seamless learning journey from fundamental programming syntax to advanced analytical applications. It begins by laying a solid foundation in the History and Fundamentals of R, covering installation, package management, control structures, and essential data operations like matrices and strings.

The purpose is to equip readers with the skills to effectively manipulate, analyze, and visualize data, leveraging R's outstanding graphical capabilities. The practical value is immediately evident through its coverage of reading and writing various data interfaces (CSV, XML, Web Data) and generating professional-grade charts and graphs for visualization. Moving beyond basics, the book dedicates extensive sections to applying core Statistical Techniques (including distributions, ANOVA, and time series analysis) and diving deep into Machine Learning paradigms like Classification (Random Forest, SVM), Clustering (K-Means), and Association Rule Mining (Apriori). Finally, it introduces cutting-edge application development using R Shiny to build interactive web applications and scales up analysis with instruction on Integrating Hadoop with R. The target audience includes students (particularly those in courses like SCSA4001), data science professionals, statisticians, and researchers seeking a practical, cross-platform resource for data-driven decision-making.

Salient Features:

- **Fundamental R Concepts:** Provides a robust introduction to R, covering installation, package management, control structures (loops, conditionals), user-defined functions, and matrix/string operations.

- **Comprehensive Data I/O:** Details methods for reading and writing data using R, including common formats like CSV and XML, as well as techniques for scraping and interacting with Web Data.
- **Statistical Toolkit:** Explores key statistical applications such as descriptive statistics, probability distributions, ANOVA, and time series analysis, utilizing essential R packages like MASS and STATS.
- **Hands-on Visualization:** Teaches the creation of various graphical representations, including Pie Charts, Bar Charts, Box Plots, and Scatter Plots, to effectively communicate data insights.
- **Core Classification Models:** Explains the implementation of major classification algorithms like Decision Trees, Random Forest, and Support Vector Machines (SVM) for building predictive models.
- **Advanced Data Mining:** Covers unsupervised learning with K-Means Clustering, discovers patterns with Apriori Association Rule Mining, and identifies anomalies through Local Outlier Factor (LOF) Analysis.
- **Interactive App Development:** Guides the user in creating and deploying R Shiny web applications, covering UI.R and Server.R components for dynamic, shareable visualizations.
- **Big Data Scalability:** Introduces the concept and practical steps for Integrating R with Hadoop using the RHadoop framework, enabling users to perform analysis on massive datasets.

Author

S. Revathy

M.S. Roobini



Machine Learning Tools & Techniques

Author : Lekshmi S. Raveendran, Minu Susan Jacob, R. Sathyabama Krishna

ISBN 13 : 978-93-55388-17-9

ISBN 10 : 9355388179

E-ISBN 13 : 978-93-55388-17-9

Edition : First

Pages : 68

Type of book : Physical

Year : 2026

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 148.00

Categories : [Computer Science Engineering,](#)
[New Arrivals, Book Store,](#)
[Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

"Machine Learning Tools and Techniques" serves as a thorough and approachable guide, offering a comprehensive overview of essential ML concepts, tools, and methodologies crucial for navigating the modern era of artificial intelligence and big data. The book is purposefully structured to bridge the gap between theoretical foundations and practical implementation, making it a critical resource for developing intelligent systems.

The learning journey begins with core data mining principles, exploring the process, fielded applications across industries like finance and healthcare, and the foundational relationship between machine learning and statistics. It systematically builds expertise through detailed discussions on knowledge representation (including trees, linear models, and rules) and the crucial concepts of model credibility and evaluation, covering rigorous techniques like cross-validation, hyperparameter tuning, and the Minimum Description Length (MDL) principle. A strong emphasis is placed on essential data preprocessing and transformation methods, such as attribute selection and data cleansing.

Crucially, the book introduces a versatile ML tool-kit, providing hands-on application demonstrations for industry-standard platforms and libraries, including Scikit-Learn, TensorFlow, PyTorch, KNIME, and IBM Watson. This text is an ideal resource for students, researchers, and professionals seeking to gain hands-on expertise in applying cutting-edge ML solutions to develop real-world applications and contribute meaningfully to the field of AI and data analytics.

Salient Features:

- **Foundational Concepts:** Covers the complete data mining process, the core relationship between machine learning and statistics, and essential ethical considerations for responsible AI deployment.

- **Knowledge Representation:** Detailed explanation of diverse representation methods, including decision trees, linear and rule-based models, instance-based learning, and unsupervised clustering techniques.
- **Credibility and Validation:** Focuses on rigorous model evaluation using techniques like cross-validation and hyperparameter selection, alongside the Minimum Description Length (MDL) principle to prevent overfitting.
- **Data Transformation Methods:** Explores crucial data preprocessing steps such as attribute selection, feature engineering, data cleansing, and techniques for handling multi-class data for binary classifiers.
- **Algorithmic Techniques:** Deep dive into predictive modeling using advanced Decision Trees, Classification and Association Rules, along with extending instance-based and local linear models.
- **Practical ML Tool-Kit:** Hands-on introduction to widely adopted machine learning platforms and libraries, including TensorFlow, Scikit-Learn, PyTorch, and visual tools like KNIME and WEKA.
- **Real-World Applications:** Features numerous fielded applications across healthcare, finance, e-commerce, and cybersecurity, including practical case studies for conceptual reinforcement.
- **Refining Predictions:** Discusses advanced concepts for enhancing model trustworthiness, such as evaluating numeric prediction models and calibrating class probabilities for reliable decision-making.

Author

Lekshmi S. Raveendran

Lekshmi S. Raveendran

Minu Susan Jacob

Minu Susan Jacob

R. Sathyabama Krishna



Java Programming for IoT

Author :	D. Deepa, E. Srividhya
ISBN 13 :	978-93-55383-52-5
ISBN 10 :	9355383525
E-ISBN 13 :	978-93-55383-52-5
Edition :	First
Pages :	164
Type of book :	Physical
Year :	2026
Language :	English
Publisher :	Khanna Publishing House
M.R.P :	Rs 248.00
Categories :	Computer Science Engineering, New Arrivals, Book Store, Sathyabama Series
Condition Type :	New
Country Origin :	India

Product Description

JAVA PROGRAMMING FOR IOT is a comprehensive guide designed to bridge the gap between fundamental Object-Oriented Programming (OOP) concepts in Java and their practical application within the rapidly evolving landscape of the Internet of Things (IoT). The book's core purpose is to empower readers to develop complete, robust, and distributed application programs that can run across various connected systems. It meticulously covers the essentials of Java—from basic syntax, data types, and looping constructs to advanced OOP principles like Inheritance, Polymorphism, and Encapsulation. The curriculum seamlessly transitions into specialized, high-value IoT topics. Readers will master critical methodologies such as Exceptions Handling and Multi-threading, as well as essential socket programming techniques required for effective communication with connected devices. A key focus is the Java Development Environment for IoT, offering hands-on expertise with Java ME 8 and its deployment on Raspberry Pi using the NetBeans IDE. The practical learning culminates in detailed coverage of Application Management Systems (AMS), which includes managing the application lifecycle, configuring remote devices, and implementing strategies for securing IoT applications and ensuring data integrity in real-world scenarios. This text is an essential resource for a broad audience, including students, novice programmers eager to start their IoT journey, and experienced developers seeking to master innovative, secure, and distributed IoT solutions with the robust Java platform.

Salient Features:

- **Foundational OOP Skills:** Comprehensive coverage of core Object-Oriented Programming (OOP) concepts in Java, including Inheritance, Polymorphism, Abstraction, and Encapsulation, essential for building robust software.

- **IoT Thread Management:** Detailed units on multi-threading, thread synchronization, and managing the thread lifecycle (suspending/resuming) for building efficient and concurrent IoT Applications.
- **Embedded Development Kit:** Practical focus on setting up the Java development environment for IoT, utilizing Java ME 8, CLDC, and the NetBeans IDE for creating and deploying embedded applications.
- **Raspberry Pi Integration:** Step-by-step guidance on running the Java Runtime on a Raspberry Pi board, including using the Command Line Interface (CLI) for deployment and application testing.
- **Secure IoT Deployment:** Dedicated strategies for securing IoT applications and ensuring data integrity, covering topics like device authentication and the built-in security features of Java ME 8.
- **Application Lifecycle:** In-depth analysis of the Application Management System (AMS) for monitoring, remotely configuring, updating, and managing the entire lifecycle of deployed IoT solutions.
- **Device Communication:** Instruction on various socket programming methods to establish and manage communication channels, enabling Java programs to effectively interact with network-connected devices.
- **Notification & Alarms:** Practical modules on creating real-time event-driven notifications using PushRegistry and configuring Alarm Registration for comprehensive system monitoring in the AMS.

Author

D. Deepa

Deepa, Keerthana P., S. Praveen

E. Srividhya

E. Srividhya



Introduction to Data Science

Author : Sonia Jenifer Rayen, Sathyabama Krishna

ISBN 13 : 978-93-55385-54-3

ISBN 10 : 9355385544

E-ISBN 13 : 978-93-55385-54-3

Edition : First

Pages : 168

Type of book : Physical

Year : 2026

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 298.00

Categories : [Computer Science Engineering,](#)
[New Arrivals, Book Store,](#)
[Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

In an era where data is the central driver of innovation, Introduction to Data Science offers a comprehensive and structured guide to navigating this transformative field. Designed for a broad audience including students, researchers, and professionals, this book provides a beginner-friendly approach to mastering fundamental concepts, core statistical methods, and essential predictive analytics.

The text seamlessly integrates theoretical principles with practical, real-world applications, empowering readers to not only grasp key concepts but also effectively apply them in diverse scenarios. The curriculum is meticulously structured, beginning with the foundational role and processes of Data Science and advancing through descriptive and inferential statistics, data quality management, and text data handling. It culminates by exploring the challenges and cutting-edge applications of Big Data.

The book demystifies the complete data science lifecycle—from formulating the right research questions and retrieving data to building predictive models, validating results, and deploying final applications. Beyond technical proficiency, it highlights the essential traits of a successful data scientist, such as curiosity, common sense, and communication, making it an invaluable resource for anyone seeking a robust, end-to-end understanding of data-driven decision-making in vital sectors like healthcare, finance, logistics, and AI.

Salient Features:

- **Foundational Concepts:** Provides a structured, beginner-friendly introduction to the field, covering the need for data science, its core components, and processes.
- **Statistical Core:** Delves into essential descriptive and inferential statistics, including data distribution analysis, correlation, regression, and crucial hypothesis testing techniques.

- **Data Quality Focus:** Dedicated unit on enhancing data quality, covering practical methods like data imputation, standardization, binning, and handling noise and outliers effectively.
- **Text Data Analytics:** Explores specialized techniques for handling unstructured text data, such as Bag-of-Words, tokenization, regular expressions, and real-world sentiment analysis.
- **Predictive Modeling:** Introduces the critical modeling phase, emphasizing algorithm selection, execution, and essential diagnostics for building and training performant models.
- **Big Data Context:** Addresses the challenges and use cases of Big Data, focusing on the three critical V's: Volume, Velocity, and Variety perspective.
- **Data Scientist Traits:** Highlights the crucial non-technical skills for success in the field, including the importance of curiosity, common sense, and effective communication.
- **Real-World Applications:** Features practical use cases and business examples across diverse industries like autonomous vehicles, e-commerce, and airline logistics.

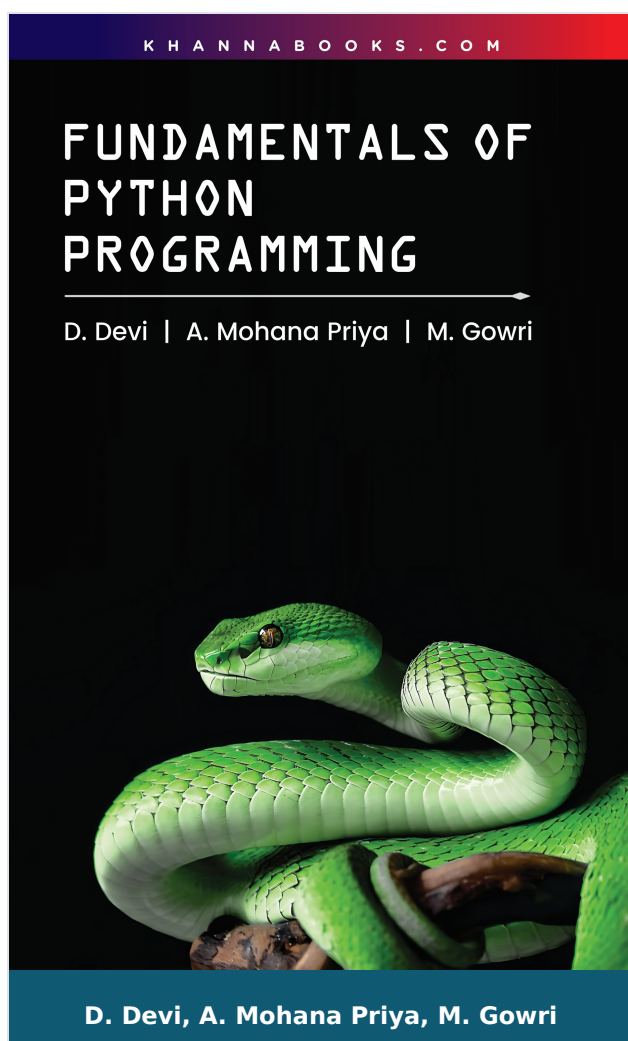
Author

Sonia Jenifer Rayen

Sonia Jenifer Rayen, Associate Professor, Dept of CSE, Sathyabhama Institute of Science and Technology

Sathyabama Krishna

Sathyabama Krishna



Fundamentals of Python Programming

Author : D. Devi, A. Mohana Priya, M. Gowri

ISBN 13 : 978-93-55382-31-3

ISBN 10 : 9355382316

E-ISBN 13 : 978-93-55382-31-3

Edition : First

Pages : 160

Type of book : Physical

Year : 2026

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 248.00

Categories : [Computer Science Engineering,](#)
[New Arrivals, Book Store,](#)
[Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

PROGRAMMING IN PYTHON is an essential, comprehensive resource designed to guide readers from foundational concepts to advanced application development in the world's most versatile programming language. The book's core purpose is to leverage Python's interpreted, high-level nature, which prioritizes readability and ease of use, making complex coding accessible to everyone. It systematically introduces the easy-to-understand syntax and covers crucial programming paradigms, including structured programming, working with data types, expressions, operator precedence, and robust Object-Oriented Programming (OOP) principles like Inheritance, Polymorphism, and Abstraction.

Beyond the fundamentals, this guide provides practical value by diving into the extensive Python ecosystem. Readers will learn to utilize major libraries like NumPy and Pandas for efficient data analysis, explore building Graphical User Interfaces (GUI) using the built-in Tkinter library, and establish database connectivity using PyMongo for MongoDB. Given Python's widespread use in web development, data science, artificial intelligence, and automation, this book is perfectly suited for a wide audience. It is an ideal textbook for students and newcomers seeking to master a powerful first language, and a valuable reference for professionals and developers looking to harness Python for real-world projects and demanding industry roles. Salient Features:

- **Foundational Syntax Mastery:** Provides a thorough understanding of Python's fundamental building blocks, covering basic data types, complex expressions, operator precedence, and essential control flow statements like if/else and for/while loops.
- **Object-Oriented Paradigms:** Explores core OOP concepts, including Inheritance, Encapsulation, and Polymorphism (method and operator overloading), with a focus on implementing Abstraction using the ABC module.

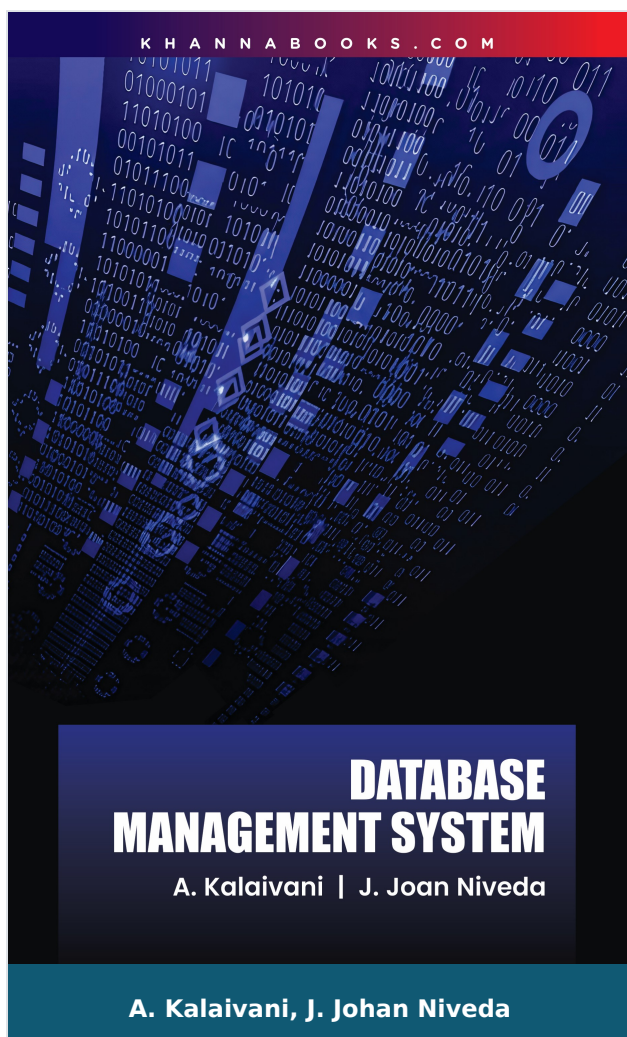
- **Data Analysis Libraries:** Features detailed chapters on NumPy for efficient numerical array operations and Pandas for structured data manipulation, equipping the reader with crucial skills for data science roles.
- **Interactive GUI Development:** Guides the reader through creating graphical applications using the built-in Tkinter library, covering essential widgets, layout managers, and handling various user events and bindings.
- **Database Connectivity:** Introduces practical NoSQL database integration using the PyMongo library. Learn to connect, insert, query, update, and manage documents and entire collections in MongoDB.
- **Ecosystem and Tools:** A comprehensive reference to Python's rich set of built-in functions, alongside instructions for creating and importing custom modules and managing dependencies using the pip tool.
- **Control Flow Structures:** Detailed explanation of all sequential control structures, from traditional if-elif-else statements to modern Python match-case statements, for managing program flow efficiently.
- **Real-World Applications:** Showcases Python's versatility across multiple domains, including scripting for automation, scientific computing, and leveraging major frameworks for modern web development like Django/Flask

Author

D. Devi

A. Mohana Priya

M. Gowri



Database Management System

Author : A. Kalaivani, J. Johan Niveda

ISBN 13 : 978-93-55386-72-4

ISBN 10 : 9355386729

E-ISBN 13 : 978-93-55386-72-4

Edition : First

Pages : 176

Type of book : Physical

Year : 2026

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 298.00

Categories : [Computer Science Engineering,](#)
[New Arrivals, Book Store,](#)
[Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

The book, Database Management System, is an essential resource for navigating the data-driven landscape of the modern technological era. Recognizing that efficient, secure, and easily accessible data management is a critical task for all industries—from e-commerce to finance—this text provides a clear and comprehensive introduction to the field. Its core purpose is to build a strong theoretical foundation in database concepts while equipping readers with practical, real-world skills.

The text offers a structured learning pathway, commencing with foundational principles like the history, architecture, and characteristics of Database Management Systems (DBMS). It then delves into essential topics such as conceptual modeling using the Entity-Relationship (ER) model, relational schema design, and the crucial process of normalization (up to 5NF) to ensure database efficiency and data integrity. A significant portion of the book is dedicated to Structured Query Language (SQL), covering DDL, DML, DCL, and TCL commands, query execution, optimization, and transaction processing, including the vital ACID properties. Critically, the book extends beyond traditional relational systems to address modern trends, dedicating a chapter to Concurrency Control, Recovery Techniques, and NoSQL DBMS.

Intended for undergraduate students in Computer Science, IT, and Data Science, this book is also an invaluable reference for software engineers and data analysts seeking to refine their skills. Through numerous step-by-step explanations, hands-on exercises, and practical implementations using real-world scenarios, the book successfully bridges the gap between academic theory and industry application, preparing readers for real-world database challenges.

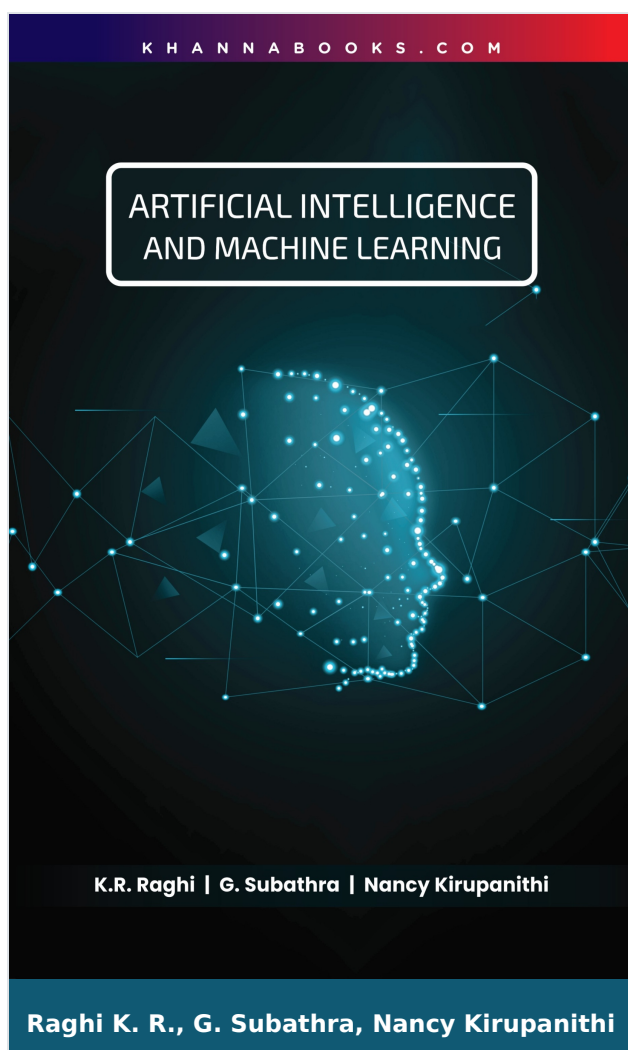
Salient Features:

- **ER & Relational Modeling:** Presents in-depth coverage of the Entity-Relationship (ER) model and systematic procedures for mapping ER diagrams to a relational schema, incorporating all essential integrity constraints.
- **Schema Refinement:** Offers a detailed exploration of functional dependencies and normalization techniques (up to 5NF). This knowledge ensures the creation of efficient, scalable database designs that minimize redundancy and anomalies.
- **Comprehensive SQL:** Provides hands-on instruction for mastering all facets of Structured Query Language (SQL), including DDL, DML, DCL, and TCL commands, complex joins, and advanced subqueries.
- **Query Optimization:** Dedicated unit on query processing, covering the translation of SQL into relational algebra, and heuristic optimization techniques to improve data retrieval speed and database performance.
- **Transaction Integrity:** Focuses on the fundamental principles of transaction processing, detailing the ACID properties (Atomicity, Consistency, Isolation, Durability) and methods for ensuring recoverability and serializability.
- **Concurrency & Recovery:** Explores advanced techniques like Two-Phase Locking (2PL), timestamp protocols for concurrency control, and robust recovery mechanisms such as deferred updates and shadow paging.
- **Practical Hands-on Learning:** Features dedicated "Practical" sections in every chapter, providing step-by-step implementation of SQL commands, schema design projects, and application of NoSQL data models using industry tools.

Author

A. Kalaivani

J. Johan Niveda



Artificial Intelligence and Machine Learning

Author : Raghi K. R., G. Subathra, Nancy Kirupanithi

ISBN 13 : 978-93-55383-36-5

ISBN 10 : 9355383363

E-ISBN 13 : 978-93-55383-36-5

Edition : First

Pages : 96

Type of book : Physical

Year : 2026

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 148.00

Categories : [Computer Science Engineering,](#)
[New Arrivals, Book Store,](#)
[Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

Artificial Intelligence and Machine Learning serves as a comprehensive and indispensable guide to two of the 21st century's most transformative fields. Recognizing the remarkable growth of AI and ML, which influences nearly every aspect of modern life—from self-driving cars and virtual assistants to healthcare diagnostics and financial forecasting—this book is designed to provide a structured approach to mastering these complex technologies.

The core purpose of this text is to bridge the gap between theoretical foundations and practical implementations. It begins by establishing the fundamental concepts of Intelligent Agents, their structure, and their decision-making processes, followed by a thorough exploration of uninformed and heuristic search strategies like A* search and optimization methods such as Simulated Annealing. The book then transitions to the heart of learning systems, covering essential Supervised and Unsupervised Learning paradigms, Neural Networks, and techniques to mitigate deep learning challenges like the Vanishing Gradient Problem. Crucially, it dedicates an entire unit to the Design and Analysis of ML Experiments, teaching readers how to validate models rigorously using K-Fold Cross-Validation and statistical tests.

This resource is tailored for a diverse audience, including students, aspiring data scientists, software engineers, and academic researchers, providing the valuable insights necessary to foster innovation and shape the future of intelligent systems. It simplifies daunting topics through easy-to-understand explanations, supplemented by real-world examples and case studies, making AI and ML accessible to all levels of expertise.

Salient Features:

- **Intelligent Agent Core:** Define the core components and types of intelligent agents (Simple Reflex, Model-Based, Goal-Based, Utility-Based), and analyze their structure and

decision-making processes.

- **Advanced Search Methods:** Explore heuristic search (A*) and optimization techniques like Hill Climbing and Simulated Annealing for navigating complex, large-scale problem spaces.
- **Learning Paradigms:** Detailed coverage of Supervised and Unsupervised Learning, along with the principles of PAC Learning and handling Model Selection and Generalization.
- **Deep Network Architectures:** A unit dedicated to Neural Networks, explaining Multilayer Perceptrons and addressing deep learning challenges like the Vanishing Gradient Problem with solutions like ReLU and Dropout.
- **Optimization Techniques:** In-depth exploration of network training using Gradient Descent and Error Backpropagation, covering advanced optimization methods like Stochastic Gradient Descent for efficiency.
- **Experimental Design:** Essential unit on the rigor of ML development, including guidelines for experiments, K-Fold Cross Validation, Bootstrapping, and using statistical tests for model comparison.
- **Real-World Applications:** Illustrated examples of ML in practice, including Self-Driving Cars, Healthcare Diagnosis, and Personalized Recommendation Systems, showing technology's transformative impact.

Table Of Contents

- Intelligent Agents
- Problem Solving
- Introduction to Machine Learning
- Natural Networks
- Design and Analysis of Machine learning Experiments

Author

Raghi K. R.

Raghi.K.R Subathra.G Nancy Kirupanithi

G. Subathra

Raghi.K.R Subathra.G Nancy Kirupanithi

Nancy Kirupanithi

Nancy Kirupanithi



Blockchain and Cryptocurrency

Author : D. Geethanjali, R. Jeberson Retna Raj

ISBN 13 : 978-93-55386-32-8

ISBN 10 : 935538632X

E-ISBN 13 : 978-93-55386-32-8

Edition : First

Pages : 136

Type of book : Physical

Year : 2026

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 200.00

Categories : [Computer Science Engineering,](#)
[New Arrivals, Book Store,](#)
[Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

The world is undergoing a massive paradigm shift in how we manage trust, data, and digital value. BLOCKCHAIN AND CRYPTOCURRENCY offers a comprehensive and accessible journey into the heart of this technological revolution, moving beyond the hype of market trends to explore the foundational principles of decentralized systems. Written with a holistic approach, this book breaks down the intricate mechanics of blockchain technology—including consensus algorithms, cryptography, and P2P networking—making them understandable for both curious beginners and aspiring developers.

The text provides a deep dive into the evolution of digital money, from the pioneering launch of Bitcoin to the advanced smart contract capabilities of Ethereum and the burgeoning world of Decentralized Finance (DeFi). Readers will explore real-world applications across diverse sectors such as healthcare, finance, and governance, while gaining critical insights into the ethical, regulatory, and security challenges that face the industry today. Whether you are a student seeking academic clarity or a professional looking to leverage decentralized applications, this book serves as an essential guide to the future of the digital economy.

Salient Features:

- **Comprehensive Technical Foundations:** Detailed explorations of blockchain architecture, including P2P networking, block structures, and the logical components of decentralized ecosystems.
- **Smart Contract Mastery:** In-depth coverage of Ethereum and the development of self-executing contracts using Solidity and Javascript to automate complex business logic.
- **Cryptocurrency Lifecycle Insights:** Clear explanations of the mining process, transaction lifecycles, and the role of wallets and private keys in securing digital assets.

- **Robust Security Analysis:** A critical look at security and privacy issues, covering common types of attacks, encryption methods, and strategies for system enhancement.
- **Practical Industry Applications:** Real-world use cases demonstrate how blockchain transforms sectors like healthcare EHRs, supply chain logistics, and cross-border trade finance.
- **Governance and E-Governance:** Examination of decentralized governance models and the potential for blockchain to streamline public health tracking and land registries.
- **Economic and Ethical Implications:** Insightful discussions on the "dark side" of crypto, including scams, money laundering, and the evolving global regulatory landscape.
- **Future-Ready Learning:** Focus on emerging trends and the transition from traditional centralized institutions to a world where trust is embedded in technology

Table Of Contents

- Introduction to Blockchain
- Ethereum Basics
- Introduction to Bitcoin
- Fundamentals of Cryptocurrencies
- Security and Privacy Issues of Blockchain Technology

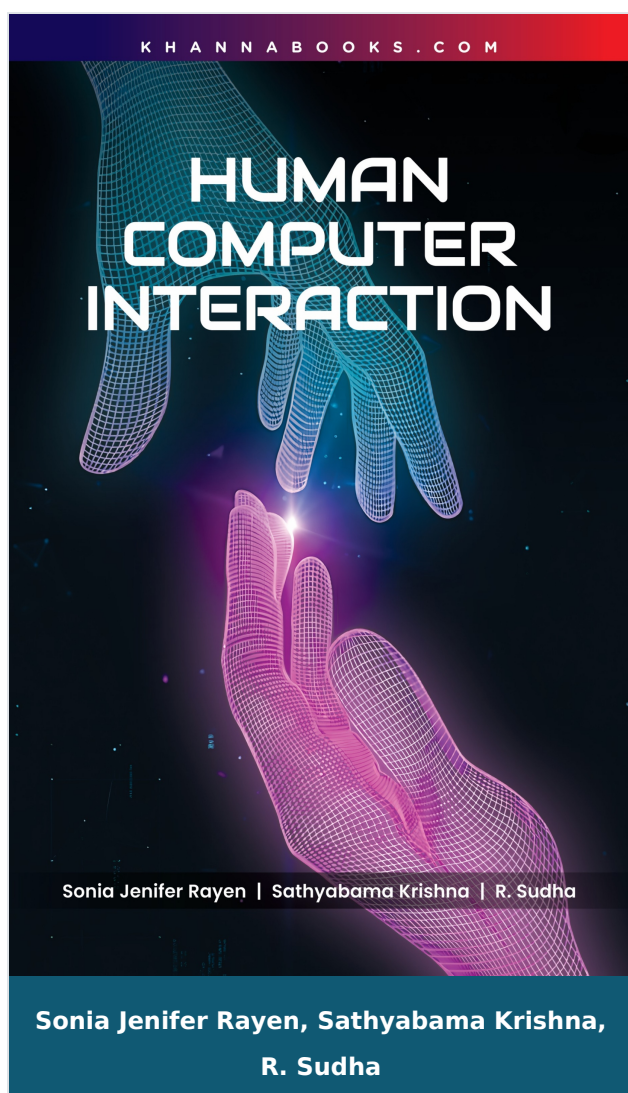
Author

D. Geethanjali

D. Geethanjali

R. Jeberson Retna Raj

R. Jeberson Retna Raj



Human Computer Interaction

Author : Sonia Jenifer Rayen, Sathyabama Krishna, R. Sudha

ISBN 13 : 978-93-55389-21-3

ISBN 10 : 9355389213

E-ISBN 13 : 978-93-55389-21-3

Edition : First

Pages : 168

Type of book : Physical

Year : 2026

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 248.00

Categories : [Computer Science Engineering,](#)
[New Arrivals, Book Store,](#)
[Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

Human-Computer Interaction (HCI) is a comprehensive and structured resource designed to explore the principles, methodologies, and evolving landscape of interaction between humans and computing systems. Recognizing the critical role of HCI in shaping modern digital experiences, this book focuses on creating technology that is accessible, efficient, intuitive, and user-centered. It examines not only the technical dimensions of interface design but also the cognitive, psychological, and social factors that influence how people interact with digital systems across diverse platforms and devices.

The book provides a balanced blend of theoretical foundations and practical applications, enabling readers to develop a deep understanding of user-centered design principles. Beginning with the fundamentals of HCI, it explores human sensory systems, memory, perception, cognition, and information processing before progressing to advanced topics in interaction design and usability engineering. Through systematic coverage of design methodologies and evaluation techniques, readers learn how to create interfaces that improve user satisfaction, efficiency, and accessibility.

A significant emphasis is placed on contemporary application domains, including mobile interfaces, web applications, and interactive systems. The text introduces established cognitive models such as GOMS (Goals, Operators, Methods, and Selection Rules), linguistic models, and cognitive architectures that assist in predicting user behavior and optimizing interface performance. It also examines socio-organizational considerations, stakeholder requirements, and collaborative design approaches essential for successful system development.

Designed for students, researchers, academics, and industry professionals, this book serves as a valuable guide for mastering interface design, usability evaluation, and user experience development. By integrating human factors, cognitive science, and practical

design methodologies, it equips readers with the knowledge and tools required to build effective, engaging, and user-friendly computing systems.

Salient Features:

- **Foundational Principles:** Introduces the core objectives of Human-Computer Interaction, including usability, human factors, user-centered design, and the interdisciplinary contributions of computer science and cognitive psychology.
- **Human System Analysis:** Explores human sensory and perceptual systems, including vision, hearing, touch, memory, cognition, and information-processing mechanisms that influence user interaction.
- **Interaction Design:** Covers the essential principles of creating intuitive and effective user interfaces, including navigation structures, screen layouts, interaction scenarios, and the role of HCI within the software development lifecycle.
- **Cognitive Models:** Provides detailed coverage of major theoretical frameworks such as GOMS (Goals, Operators, Methods, and Selection Rules), linguistic models, and cognitive architectures for analyzing and predicting user performance.
- **Socio-Technical View:** Examines socio-organizational aspects of system design, including stakeholder analysis, communication models, collaboration frameworks, and non-technical factors affecting technology adoption.
- **Mobile HCI Deep Dive:** Discusses the mobile ecosystem, mobile application frameworks, mobile web technologies, information architecture, and design challenges associated with modern mobile computing environments.
- **Web Interface Mastery:** Guides readers through user interface design best practices for web applications, including interface components, navigation structures, interaction techniques, and workflow optimization.
- **Practical Prototyping:** Covers iterative design and prototyping methodologies, including formative and summative evaluation techniques, storyboarding, animation-based prototypes, and limited-functionality simulations for interface

testing and refinement.

Table Of Contents

- Foundation of Human Computer Interaction (HCI)
- Design & Software Process
- Models and Theories
- Modeling HCI
- Web Interface Design

Author

Sonia Jenifer Rayen

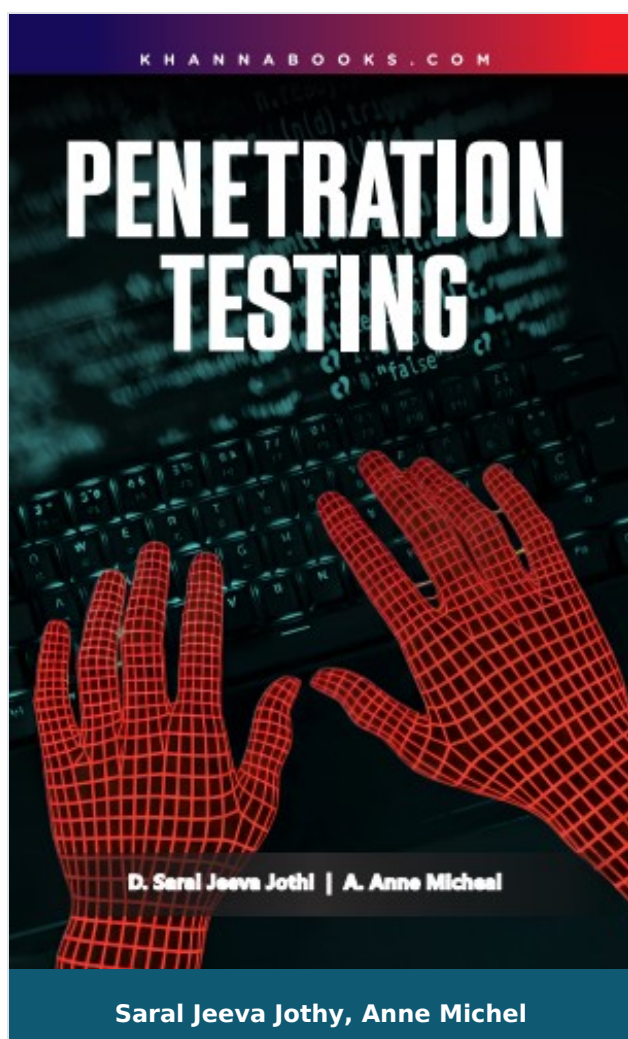
Sonia Jenifer Rayen, Associate Professor, Dept of CSE, Sathyabhama Institute of Science and Technology

Sathyabama Krishna

Sathyabama Krishna

R. Sudha

R. Sudha



Penetration Testing

Author : Saral Jeeva Jothy, Anne Michel

ISBN 13 : 978-93-55387-36-3

ISBN 10 : 9355387369

E-ISBN 13 : 978-93-55387-36-3

Edition : First

Pages : 104

Type of book : Physical

Year : 2025

Language : English

Publisher : Khanna Publishing House

M.R.P : Rs 148.00

Categories : [New Arrivals, Book Store,](#)
[Sathyabama Series](#)

Condition Type : New

Country Origin : India

Product Description

Penetration Testing

In today's digital age, where cyber threats are constantly evolving, Penetration Testing—often referred to as ethical hacking—is the most crucial practice for identifying and addressing security vulnerabilities.

Penetration Testing is designed to provide a comprehensive understanding of the field and its methodologies. This book offers a systematic approach to simulating cyberattacks on systems to uncover weaknesses before malicious hackers can exploit them. Readers will gain the theoretical knowledge and hands-on experience necessary to conduct effective security assessments in a controlled, ethical, and legal manner.

You will master the entire pen testing lifecycle: from initial reconnaissance and exploitation to post-exploitation and delivering a detailed, actionable report. By emphasizing practical skills and real-world tools, this resource prepares students and professionals alike to confidently secure systems and ensure compliance with critical industry regulations like PCI DSS, GDPR, and HIPAA.

Salient Features:

- **Foundational Knowledge:** Introduction to the basic principles of Cryptography, including detailed coverage of algorithms like AES, DES, RSA, and SHA.
- **Methodology Mastery:** In-depth discussion of the three major penetration testing approaches: Black Box, White Box, and Grey Box, and when to choose each method.
- **Five-Phase Process:** Step-by-step guidance through the entire pen testing procedure, covering Planning & Reconnaissance, Scanning, Gaining Access, Post-Exploitation, and Reporting.
- **OS & Network Exploitation:** Hands-on experience with Windows and Linux password hashes, exploitation in Internetworks, and testing Wireless Networks.

- **Industry-Standard Tools:** Practical application of essential tools and frameworks, including Nmap for scanning, the Metasploit Exploitation Framework, and Netcat for pivoting and remote connections.
- **Compliance and Ethics:** Comprehensive coverage of the Ethical and Legal Considerations required to conduct penetration tests responsibly, ensuring tests adhere to governance frameworks.
- **Actionable Reporting:** Detailed structure and components of a professional Penetration Testing Report, including the Executive Summary, Risk Assessment, and clear, prioritized Recommendations for remediation.

Table Of Contents

- Preface
- Introduction to Penetration Testing
- Penetration Testing Methodologies
- Phase of Penetration
- Penetration Testing with Internet Works
- Penetration Testing in Linux, Window

Author

Saral Jeeva Jothy

Saral Jeeva Jothy

Anne Michel

Anne Michel,