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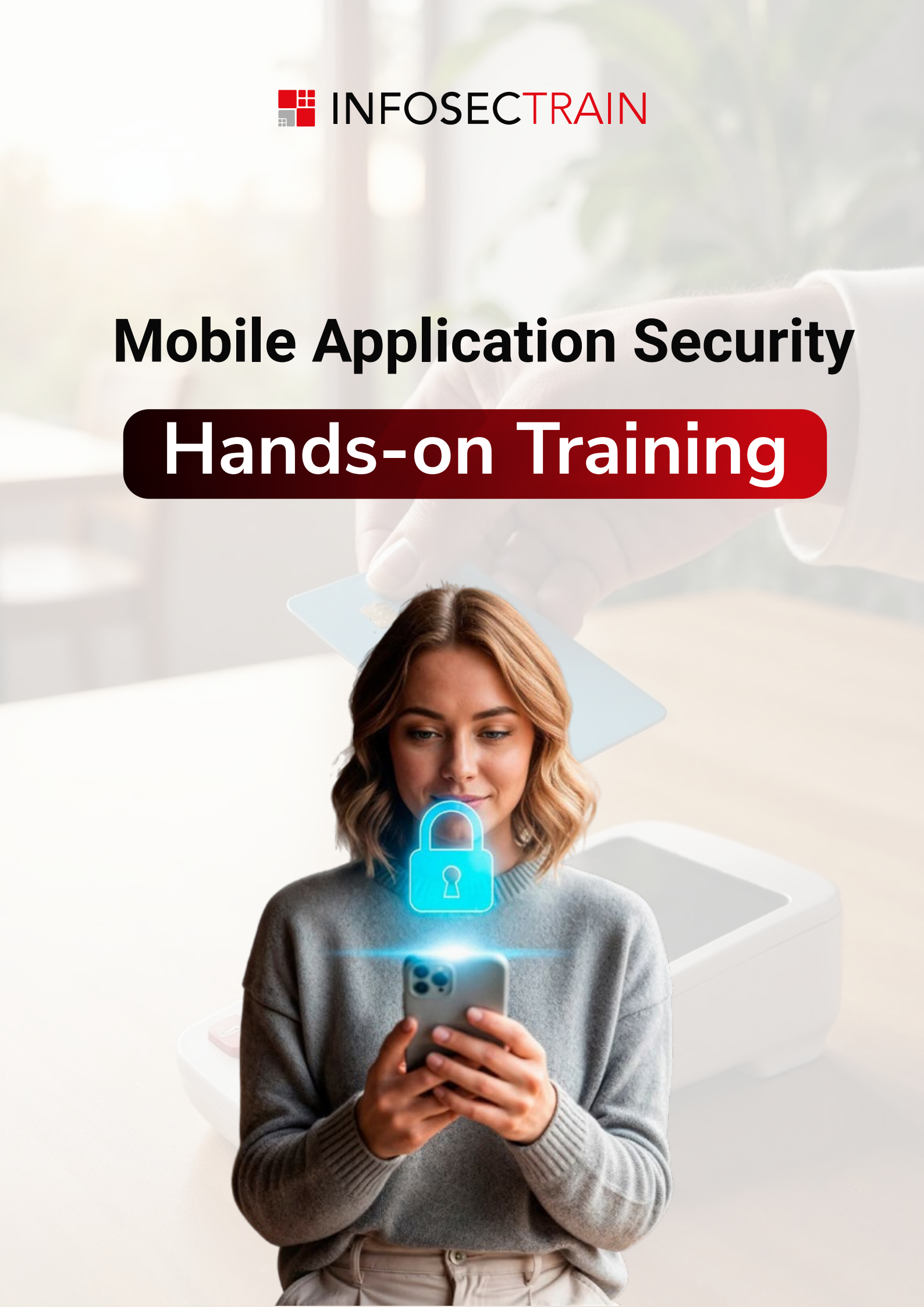
Mobile Application Security

Hands-on Training



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Course Highlights

- **40-Hour LIVE** Instructor-Led Training
- Hands-on 15+ Security Tools
- Telegram Group for Exam Support
- Real-World Case Studies
- Android & iOS Coverage
- Certified Experts
- OWASP & MASVS Focus
- Access to Recorded Sessions
- Career Guidance & Mentorship

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About Course

With the exponential growth of mobile apps, security has become a top priority for organizations. This course provides a comprehensive learning path covering mobile app architectures, OWASP Mobile Top 10, penetration testing methodologies, and advanced tools for static and dynamic analysis. You'll explore real-world attack vectors, reverse engineering, obfuscation, and Mobile Application Security Verification Standard (MASVS). By the end, you'll have the expertise to perform professional mobile app security assessments.

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Course Objectives

Upon successful completion of the training, participants will be able to:

- Understand the fundamentals of mobile application security and architecture.
- Conduct penetration testing on Android and iOS applications.
- Apply OWASP Mobile Top 10 and MASVS frameworks in real-world testing.
- Use advanced tools like Frida, MobSF, Burp, Objection for security assessments.
- Perform static and dynamic analysis of apps including reverse engineering.

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Target Audience

The training is ideal for:

- Security Professionals & Penetration Testers
- Application Developers (iOS & Android)
- QA & Security Test Engineers
- IT Administrators & Security Architects
- Cybersecurity Students & Enthusiasts

Pre-requisites

- Web & API Pen Testing Basics
  - Understand HTTP/S, headers, cookies, sessions
  - Familiarity with OWASP Top 10 (especially for APIs)
  - Experience with tools like Burp Suite, Postman, and curl
- Mobile OS Fundamentals
  - Know how Android and iOS differ in architecture
  - Understand app lifecycle, permissions, and sandboxing
  - Be able to navigate settings, install APKs/IPAs, and use emulators

Technical Requirements

- Hardware/Devices
  - iPhone 6s (iOS 15.8 or above)
  - Google Pixel 2 or Pixel 3 (Android)
  - Data cable Type-A to Lightning

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Course Content

Module 1: Introduction to Mobile Applications & Security

- Evolution of Mobile Applications
- Importance of Mobile Application Security
- Key Threats in Mobile Ecosystems

Module 2: Fundamentals of Penetration Testing

- Penetration Testing Process
- Penetration Testing Methodologies
- Mobile Application Security Standards

Module 3: Mobile Platform Attack Vectors

- Top 10 Risks for Mobile Devices
- Attacking Vectors & Vulnerabilities
- Case Studies: Agent Smith, SS7, Simjacking

Module 4: Mobile Device Management (MDM) & Security

- MDM Models
- Mobile Access Control System
- Remote Wipe Mechanisms
- Understanding Miradore

Module 5: OWASP Mobile Top 10 Risks

- M1: Improper Credential Usage
- M2: Inadequate Supply Chain Security
- M3: Insecure Authentication/Authorization
- M4: Insufficient Input/Output Validation
- M5: Insecure Communication
- M6: Inadequate Privacy Controls
- M7: Insufficient Binary Protections
- M8: Security Misconfiguration
- M9: Insecure Data Storage
- M10: Insufficient Cryptography

Module 6: Setting Up Mobile Devices for Testing

- Preparing Android & iOS Devices
- Installing Required Tools (ADB, Cydia Impactor, etc.)
- Bypassing Business Logic for Exploitation

Module 7: Mobile Application Security Tools

- Overview & Hands-On with Tools:

  MobSF, Drozer, Frida, ADB, APPIE

  jdGUI, Dex2Jar, Burp, Charles Proxy

  Cydia Impactor, GDB, Objection

Module 8: Static Application Analysis

- Retrieving iOS & Android Apps for Reverse Engineering
- Decompiling Android Applications
- Circumventing iOS App Encryption
- Accelerating iOS Disassembly: Hopper & IDA Pro
- Android Application Analysis with MobSF

Module 9: Reverse Engineering Obfuscated Applications

- Identifying Obfuscation Techniques
- Decompiling Obfuscated Applications
- Decrypting Obfuscated Content with Simplify

Module 10: Dynamic Application Analysis

A. Manipulating & Analyzing iOS Applications

- Runtime iOS Application Manipulation with Cycript & Frida
- Method Swizzling in iOS
- iOS Application Vulnerability Analysis with Objection
- Tracing iOS Application Behavior & API Use
- Extracting Secrets with KeychainDumper
- Method Hooking with Frida & Objection

B. Manipulating & Analyzing Android Applications

- Android Application Manipulation with Apktool
- Reading & Modifying Dalvik Bytecode
- Adding Android Application Functionality (Java to Dalvik)
- Method Hooking with Frida & Objection

Module 11: Mobile Application Security Verification Standard (MASVS)

- Step-by-Step Recommendations for Application Analysis
- Methodical Approach to Security Verification
- Common Pitfalls in Application Security Assessments

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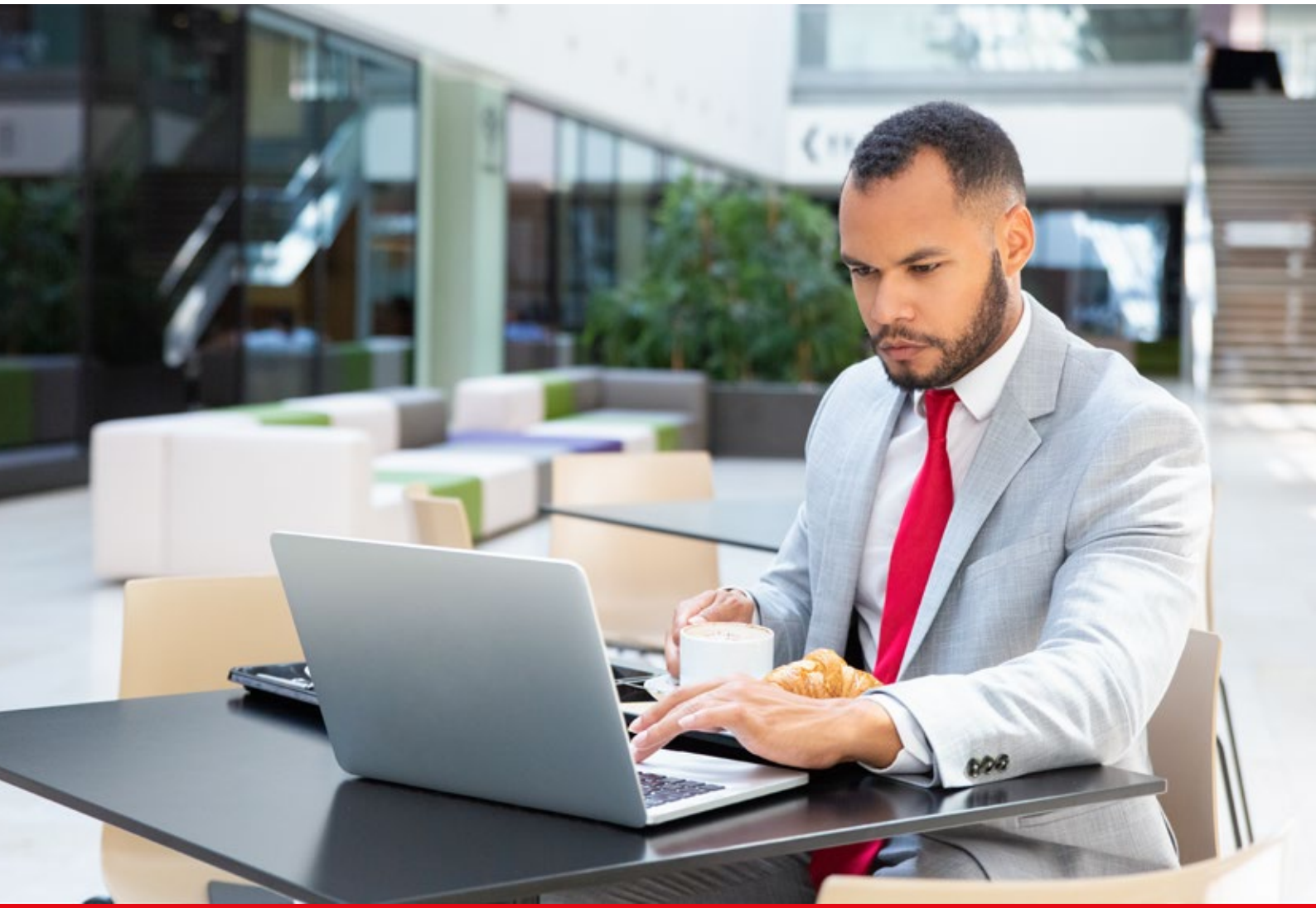
Educate. Excel. Empower.



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