

1. Exercises, Quizzes, Flashcards & Glossary

Number of Questions

2. Expert Instructor-Led Training

3. ADA Compliant & JAWS Compatible Platform

4. State of the Art Educator Tools

5. Award Winning Learning Platform (LMS)

6. Chapter & Lessons

Syllabus

Chapter 1: Preface

Chapter 2: Face Recognition

Chapter 3: Smart Healthcare Monitoring System: An IoT-Based Approach

Chapter 4: Design of Gesture-Based Hand Gloves Using Arduino UNO: A Grace to Abled Mankind

Chapter 5: Playing With Genes: A Pragmatic Approach in Genetic Engineering

Chapter 6: Digital Investigative Model in IoT: Forensic View

Chapter 7: Internet of Things Mobility Forensics

Chapter 8: A Generic Digital Scientific Examination System for Internet of Things

Chapter 9: IoT Sensors: Security in Network Forensics

Chapter 10: Xilinx FPGA and Xilinx IP Cores: A Boon to Curb Digital Crime

Chapter 11: Human-Robot Interaction: An Artificial Cognition-Based Study for Criminal Investigations

Chapter 12: VANET: An IoT Forensic-Based Model for Maintaining Chain of Custody

Chapter 13: Cognitive Radio Networks: A Merit for Teleforensics

Chapter 14: Fingerprint Image Identification System: An Asset for Security of Bank Lockers

Chapter 15: IoT Forensics: Interconnection and Sensing Frameworks

Chapter 16: IoT Forensics: A Pernicious Repercussions

Videos and How To

7. Live labs

Lab Tasks

Here's what you get

1. Exercises

There is no limit to the number of times learners can attempt these. Exercises come with detailed remediation, which ensures that learners are confident on the topic before proceeding.

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EXERCISES

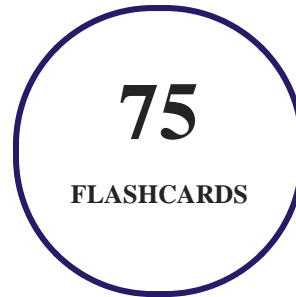
2. Quiz

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.

130
QUIZ

3. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.



4. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.



5. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

6. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

7. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

8. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
 1. Best Postsecondary Learning Solution
- **2015**
 1. Best Education Solution

2. Best Virtual Learning Solution
3. Best Student Assessment Solution
4. Best Postsecondary Learning Solution
5. Best Career and Workforce Readiness Solution
6. Best Instructional Solution in Other Curriculum Areas
7. Best Corporate Learning/Workforce Development Solution

- **2016**

1. Best Virtual Learning Solution
2. Best Education Cloud-based Solution
3. Best College and Career Readiness Solution
4. Best Corporate / Workforce Learning Solution
5. Best Postsecondary Learning Content Solution
6. Best Postsecondary LMS or Learning Platform
7. Best Learning Relationship Management Solution

- **2017**

1. Best Overall Education Solution
2. Best Student Assessment Solution
3. Best Corporate/Workforce Learning Solution
4. Best Higher Education LMS or Learning Platform

- **2018**

1. Best Higher Education LMS or Learning Platform
2. Best Instructional Solution in Other Curriculum Areas
3. Best Learning Relationship Management Solution

- **2019**

1. Best Virtual Learning Solution
2. Best Content Authoring Development or Curation Solution
3. Best Higher Education Learning Management Solution (LMS)

- **2020**

1. Best College and Career Readiness Solution
2. Best Cross-Curricular Solution
3. Best Virtual Learning Solution

9. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Preface

Chapter 2: Face Recognition

- Introduction
- Image Processing
- Deep Learning
- Methodology
- Conclusion

Chapter 3: Smart Healthcare Monitoring System: An IoT-Based Approach

- Introduction
- Healthcare at Clinics
- Remote Healthcare
- Technological Framework
- Standard UIs, Shows, and User Requirements
- Cloud-Based Health Monitoring Using IoT
- Information Acquisition
- The Processing of Cloud
- IoT-Based Health Monitoring Using Raspberry Pi
- IoT-Based Health Monitoring Using RFID
- Arduino and IoT-Based Health Monitoring System
- IoT-Based Health Monitoring System Using ECG Signal
- IoT-Based Health Monitoring System Using Android App
- Conclusion and Future Perspectives

Chapter 4: Design of Gesture-Based Hand Gloves Using Arduino UNO: A Grace to Abled Mankind

- Introduction

- Result and Discussion
- Conclusion
- Future Scope

Chapter 5: Playing With Genes: A Pragmatic Approach in Genetic Engineering

- Introduction
- Literature Review
- Methodology
- Food and Agriculture
- Impact on Farmers
- Diseases: Gene Editing and Curing
- Conclusion
- Future Scope

Chapter 6: Digital Investigative Model in IoT: Forensic View

- Introduction
- Application of AI for Different Purposes in Forensic Science
- Future of AI
- Challenges While Implementing AI

- Conclusion

Chapter 7: Internet of Things Mobility Forensics

- Introduction
- Smart Device and IoT
- Relation of Internet of Things with Mobility Forensics
- Mobility Forensics IoT Investigation Model
- Internet of Things Mobility Forensics: A Source of Information
- Drawbacks in IoT Devices Data Extraction
- Future Perspective of Internet of Things Mobility Forensics
- Conclusion

Chapter 8: A Generic Digital Scientific Examination System for Internet of Things

- Introduction
- Internet of Things
- IoT Architecture
- Characteristics of IoT
- IoT Security Challenges and Factors of Threat

- Role of Digital Forensics in Cybercrime Investigation for IoT
- IoT Security Steps
- Conclusion

Chapter 9: IoT Sensors: Security in Network Forensics

- Introduction
- Cybersecurity Versus IoT Security and Cyber-Physical Systems
- The IoT of the Future and the Need to Secure
- Security Engineering for IoT Development
- Building Security Into Design and Development
- Security in Agile Developments
- Focusing on the IoT Device in Operation
- Cryptographic Fundamentals for IoT Security Engineering
- Cloud Security for the IoT
- Conclusion

Chapter 10: Xilinx FPGA and Xilinx IP Cores: A Boon to Curb Digital Crime

- Introduction
- Literature Review

- Proposed Work
- Xilinx IP Core Square Root
- RTL View of the 8-Bit Multiplier
- RTL View of 8-Bit Down Counter
- Up/Down Counter Simulation Results
- Square Root Simulation Results
- Hardware Device Utilization Reports of Binary Down Counter
- Comparison of Proposed and Existing Work for Binary Up/Down Counter
- Conclusion

Chapter 11: Human-Robot Interaction: An Artificial Cognition-Based Study for Criminal Investigations

- Introduction
- Methodology
- Architecture Models for Robots
- Cognitive Architecture
- Challenges in the Existing Social Robots and the Future Scopes
- Conclusion

- Robots in Future Pandemics

Chapter 12: VANET: An IoT Forensic-Based Model for Maintaining Chain of Custody

- Introduction
- Cluster Performance Parameters
- Routing Protocols in VANET
- Internet of Vehicles
- IoT Forensic in Vehicular Ad Hoc Networks
- Conclusion

Chapter 13: Cognitive Radio Networks: A Merit for Teleforensics

- Introduction
- Contribution of Work
- Conclusion and Future Scope
- Acknowledgement

Chapter 14: Fingerprint Image Identification System: An Asset for Security of Bank Lockers

- Introduction
- Result and Discussion

- Conclusion
- Future Scope

Chapter 15: IoT Forensics: Interconnection and Sensing Frameworks

- Introduction
- The Need for IoT Forensics
- Various Types of Evidences Encountered
- Protocols and Frameworks in IoT Forensics
- IoT Forensics Process Model
- Suggestive Solutions
- Conclusion

Chapter 16: IoT Forensics: A Pernicious Repercussions

- Introduction: Challenges in IoT Forensics
- Scope of the Compromise and Crime Scene Reconstruction
- Device and Data Proliferation
- Multiple Data Location and Jurisdiction Challenges
- Device Type

- Lack of Training and Weak Knowledge Management
- Data Encryption
- Heterogeneous Software and/or Hardware Specifications
- Privacy and Ethical Considerations by Accessing Personal Data
- Lack of a Common Forensic Model in IoT Devices
- Securing the Chain of Custody
- Lifespan Limitation
- The Cloud Forensic Problem
- The Minimum or Maximum Period in Which Data is Stored in the Cloud
- Evidence Analysis and Correlation
- Conclusion

10. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

Lab Tasks

Digital Investigative Model in IoT: Forensic View

- Completing the Chain of Custody Form
- Training an AI Model to Recognize Patterns
- Creating a Chatbot or AI Assistant for Helping Forensic Teams

Internet of Things Mobility Forensics

- Simulating Sensor-to-Processor Communication in a Smart Device
- Simulating a MitM Attack on IoT Device Communication
- Recreating a Forensic Case Study Using IoT Logs
- Simulating Logical Data Extraction from a Smartphone
- Capturing and Analyzing Communication From IoT Devices

A Generic Digital Scientific Examination System for Internet of Things

- Identifying a Cyber Attack via Anomaly Detection

IoT Sensors: Security in Network Forensics

- Detecting Log Tampering Using SHA-256
- Securing IoT Data Using AES and RSA
- Detecting Public S3 Buckets Storing IoT Data

Xilinx FPGA and Xilinx IP Cores: A Boon to Curb Digital Crime

- Designing, Synthesizing, and Simulating an 8-bit Binary Multiplier using Verilog
- Designing and Simulating an 8-bit Binary Multiplier Using Verilog

Here's what you get

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LIVE LABS

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VIDEO TUTORIALS

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MINUTES

You can't stay away! Get

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