IoT and Blockchain

Course Duration: 8 Hours (1 Day)

Overview

The IoT and Blockchain course offers a comprehensive look into the fusion of two revolutionary technologies: the Internet of Things (IoT) and Blockchain. Through the course, learners will gain an in-depth understanding of IoT, exploring its origins, how it functions, the current landscape, and design standards and considerations. The course will address the architecture of IoT systems, detailing the journey from data generation to secure, long-term data storage. Furthermore, the course delves into the world of Blockchain, teaching its history, how it operates, and the advantages it presents over traditional systems. By integrating Blockchain with IoT, learners will discover enhanced benefits, such as increased security and trust in IoT applications. This educational journey will equip learners with the knowledge to design robust IoT solutions augmented by the security features of Blockchain technology. It's ideal for those looking to understand these technologies' impact on businesses, privacy, and technological innovation.

Audience Profile

Koenig Solutions' IoT and Blockchain course provides an in-depth exploration of the integration of cutting-edge technologies, catering to aspiring tech professionals.

- IoT Developers and Product Managers
- Blockchain Developers
- System Architects and Designers
- Network Engineers specializing in IoT solutions
- Data Analysts and Data Scientists interested in IoT data streams
- IT Managers and Consultants focused on emerging technologies
- Security Professionals addressing IoT and Blockchain security concerns
- Software Engineers looking to expand into IoT and Blockchain platforms
- Entrepreneurs developing IoT/Blockchain products or services
- Innovation Managers and Corporate Strategists exploring the impact of IoT and Blockchain
- Technical Sales and Marketing Professionals in the IoT/Blockchain domain
- Students and Researchers in fields related to IoT and Blockchain technology

Course Syllabus

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step forward

Introduction to IoT

- What is IoT?
- Overview of the Internet of Things
- History of IoT

How IoT Works

- Components of an IoT device

Current IoT Landscape

- Growth areas in IoT
- Privacy concerns in IoT

IoT Design Standards

- Zigbee networking protocol
- Thread Group
- AllSeen Alliance / AllJoyn
- Open Interconnect Consortium / IoTivity
- Industrial Internet Consortium
- ITU-T SG20
- IEEE P2413
- Apple HomeKit

IoT Design Considerations

- Key questions for designing an IoT solution

IoT Architecture

- Stage 1: Data Generation (Sensors / Actuators)
- Stage 2: Data Acquisition Systems
- Stage 3: Edge Processing
- Stage 4: Long-Term Data Storage / Blockchain

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step forward

Introduction to Blockchain

- What is Blockchain?
- History of Blockchain

How Blockchain Works

- Benefits of Blockchain
- Blockchain vs. conventional technology

Integrating IoT and Blockchain

- Benefits of adding Blockchain to IoT:
- Trust building
- Cost reduction
- Accelerated data exchanges
- Scaled security for IoT