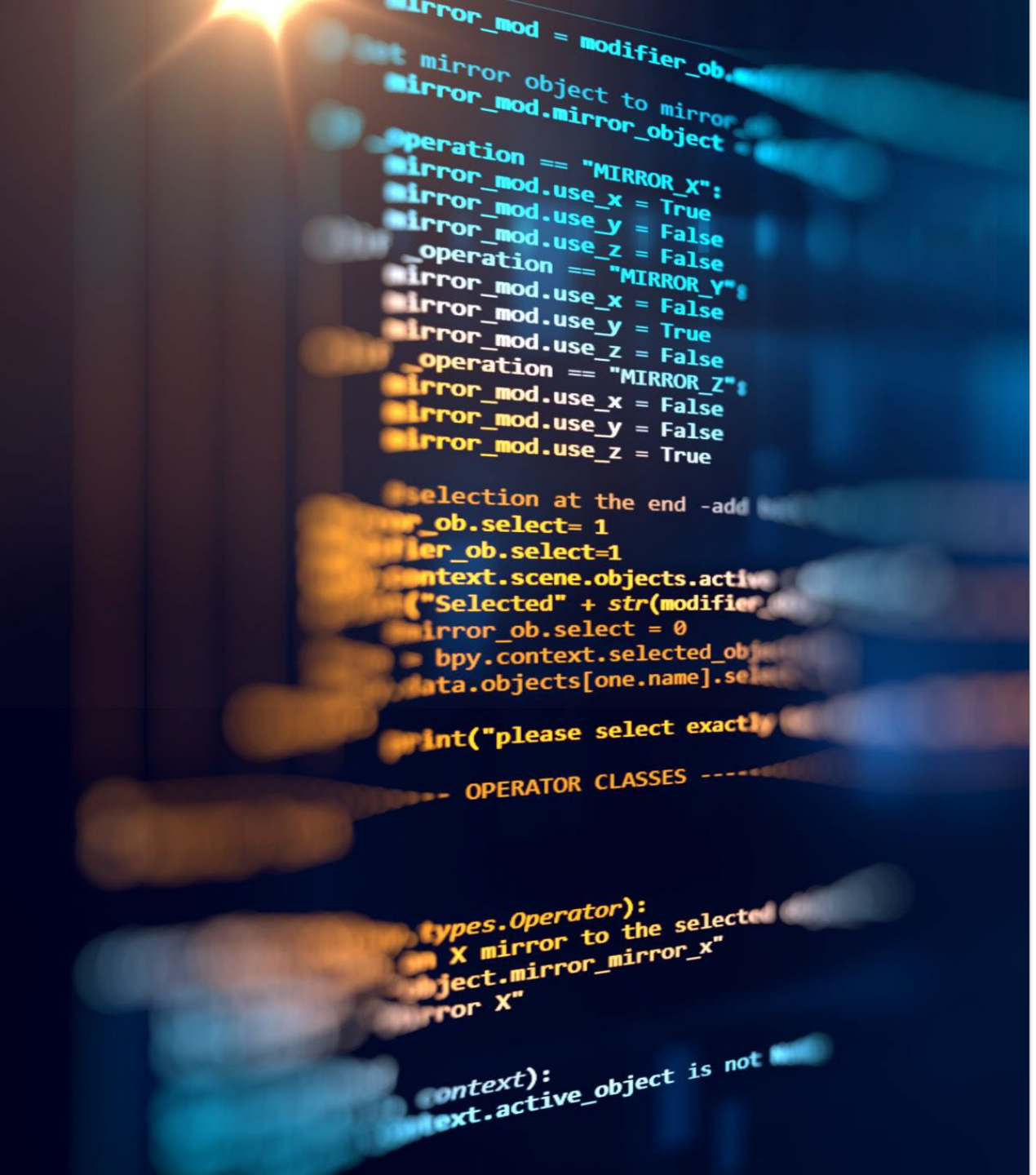
CHAPTER 10

Challenges, Opportunities, and Future Prospects



INTERNET OF THINGS SECURITY

- Security Standardization
- Software or Code Integrity

CLOUD COMPUTING BASED SECURITY SOLUTIONS

DDoS attacks in cloud- backed IoT

DDoS and communication overhead

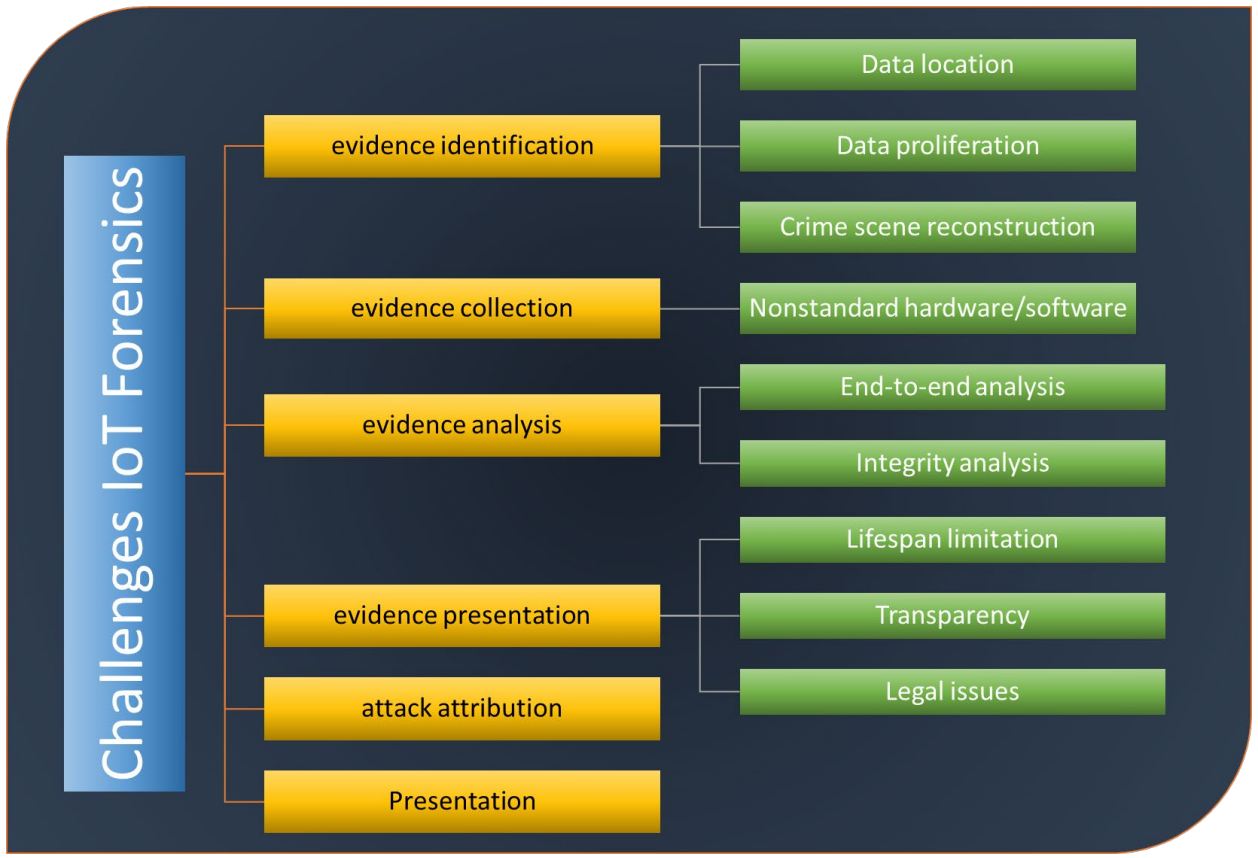
Interior cloud DDoS attack

Instantaneous cumulative analysis of traffic flows

Commercial loss

SDN-based cloud solutions

DDoS-for-Hire service



CLOUD COMPUTING BASED SECURITY SOLUTIONS

FOG COMPUTING BASED SECURITY SOLUTIONS

FOG INTELLIGENCE

SECURITY ISSUES

PRIVACY ISSUES

MAINTENANCE ISSUES

INTEROPERABILITY ISSUES

EDGE COMPUTING BASED SECURITY SOLUTIONS

- Context-Informed Security
- Microservices-based design
- Mechanisms Orchestration and Standardization

DEEP LEARNING FOR IOT SECURITY

The dataset scarcity

IoT Security Solution based on low-quality data

IoT security data Augmentation

Zero-day attacks

Enduring Learning

Transfer learning

Interdependent, interrelated, and collaborative ecosystems

DEEP REINFORCEMENT LEARNING

Resistance against Adversarial reinforcement learning

Deficient Perception Dilemma

Joint reward from multiple agents