Ethical Hacking: Hacking Mobile Platforms

Discovering Mobile Platform Attack Vectors

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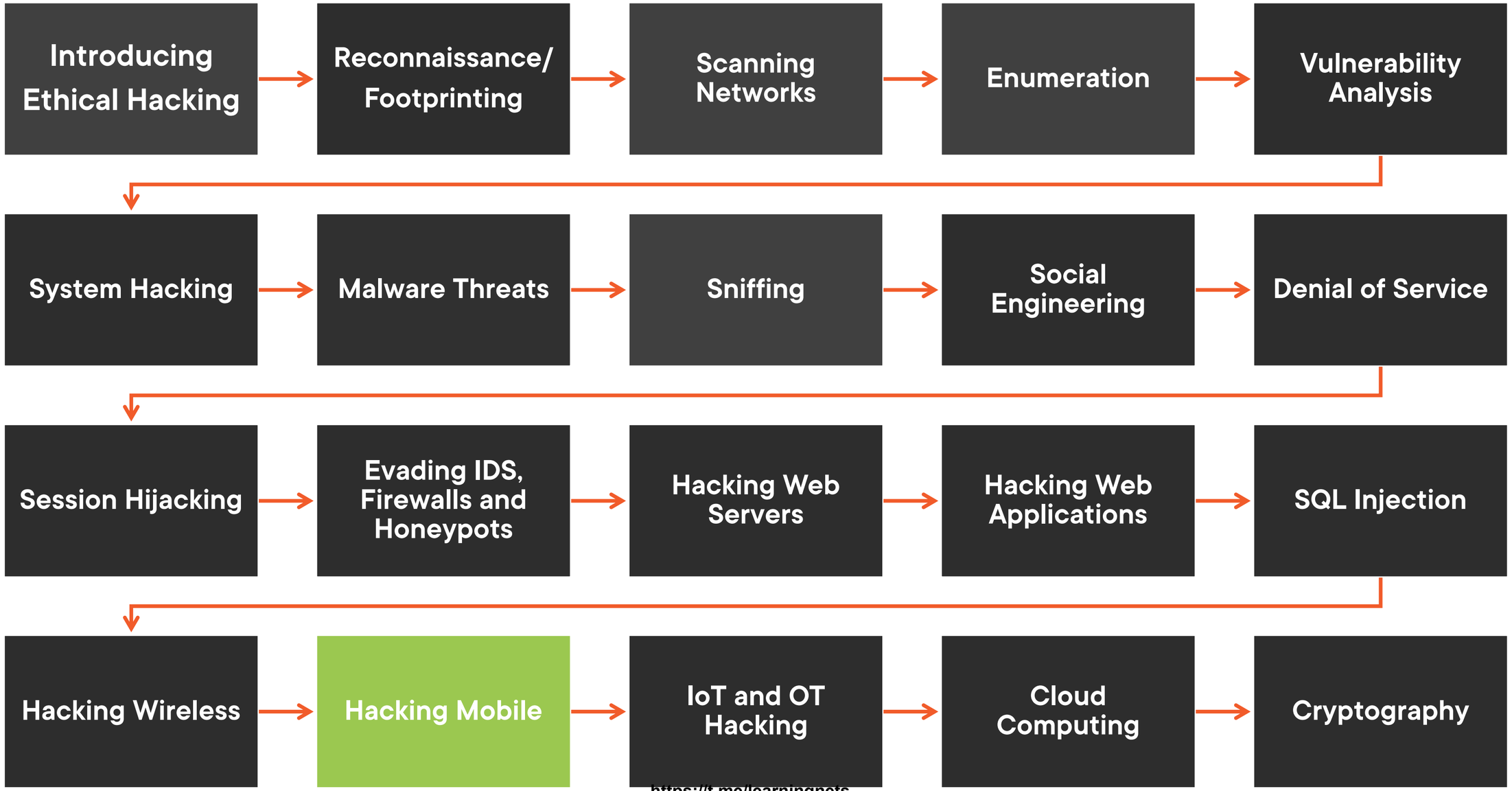
Ethical Hacking Series



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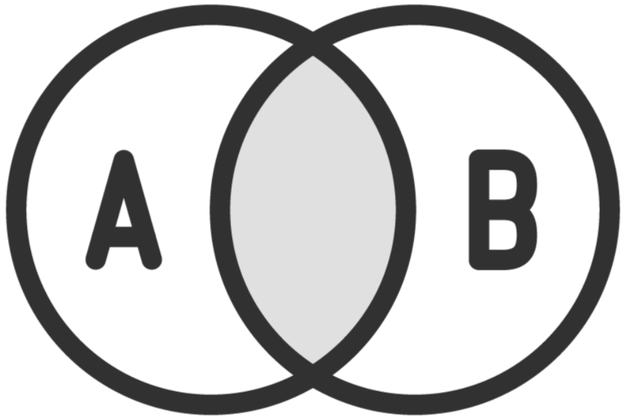
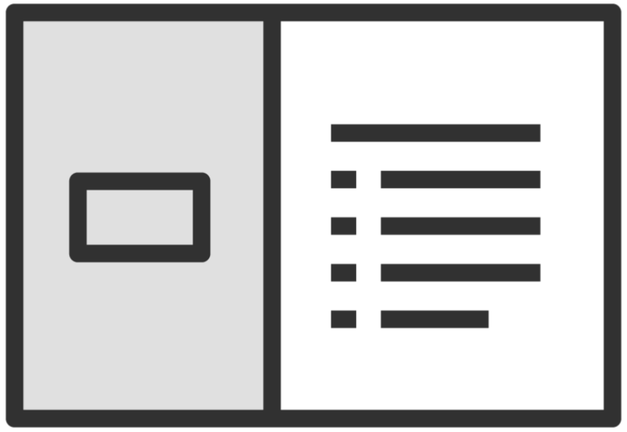
The Method behind My Madness





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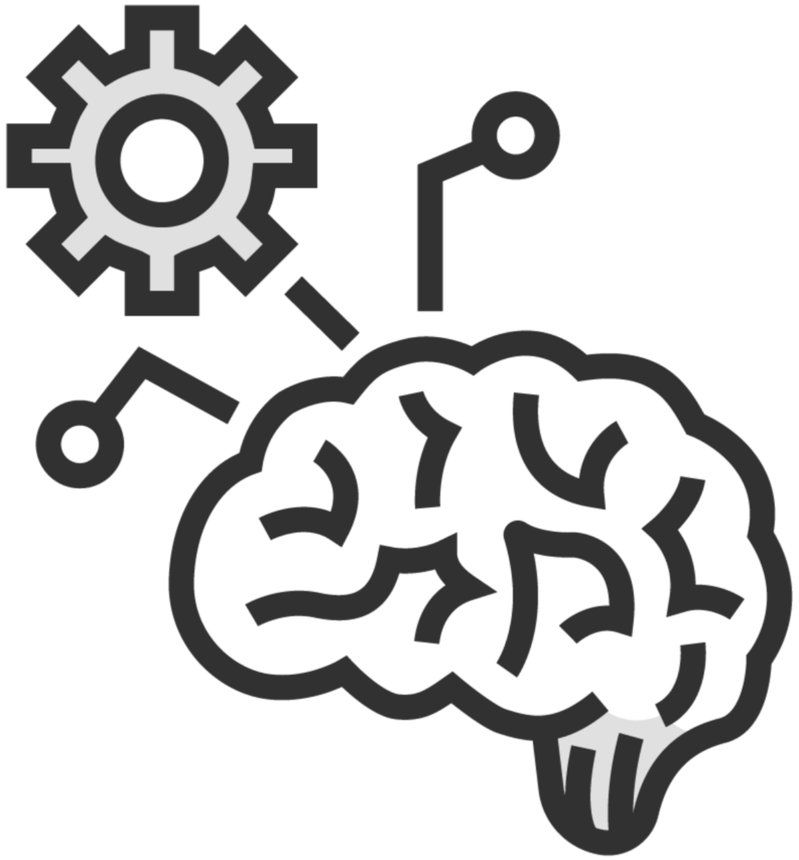

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CEH Exam Study Tips

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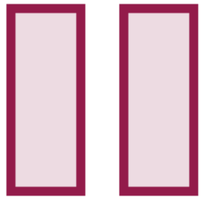
Dale's Study Tips

Study space

Take notes



Pause, think, repeat

Be kind and rewind

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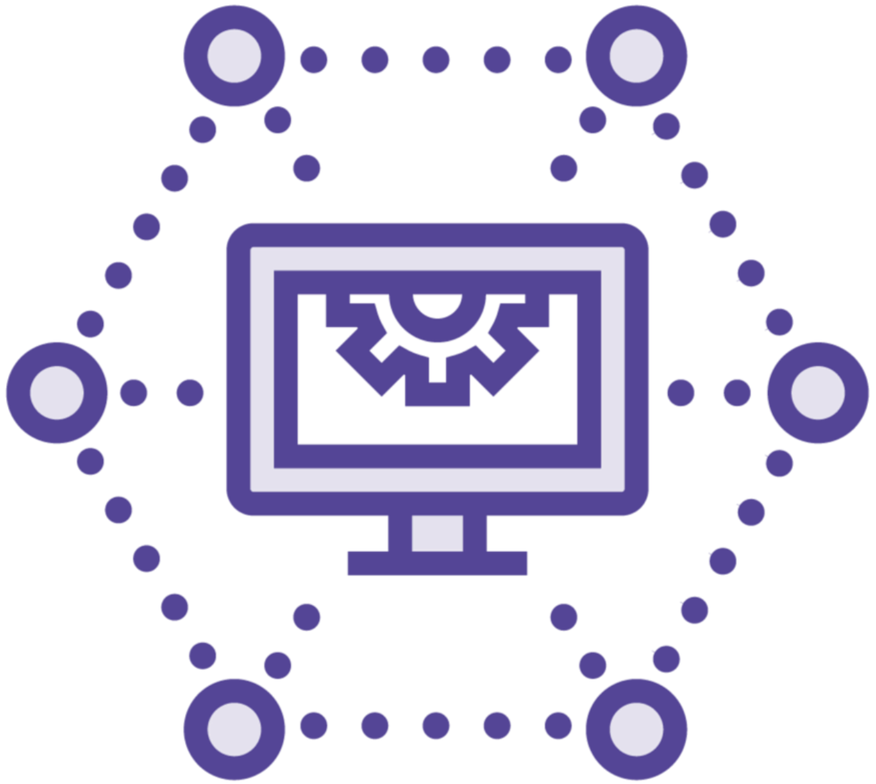
Dale's Study Tips



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“Size matters not. Look at me. Judge me by my size, do you?”

Master Yoda

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Top 10 Risks for Mobile Devices

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OWASP

Open Web Application Security Project

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Top 10 Risks

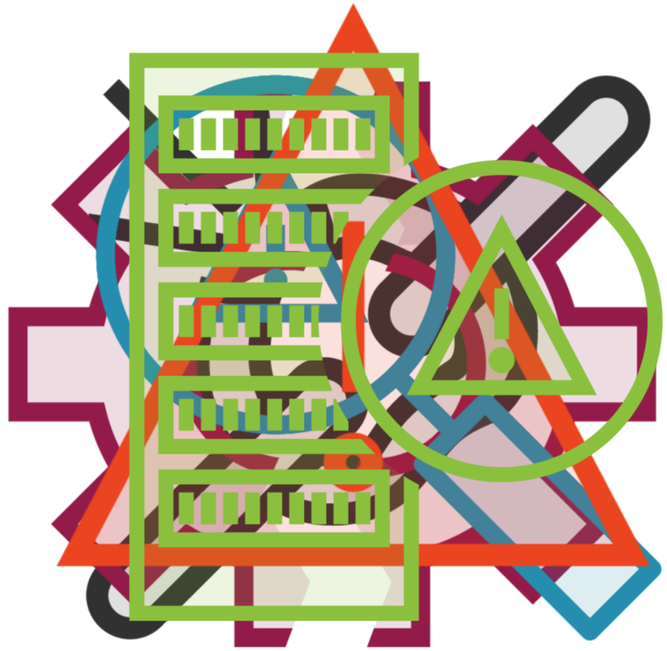
Improper platform usage

Insecure data storage

Insecure communications

Insecure authentication

Insufficient cryptography



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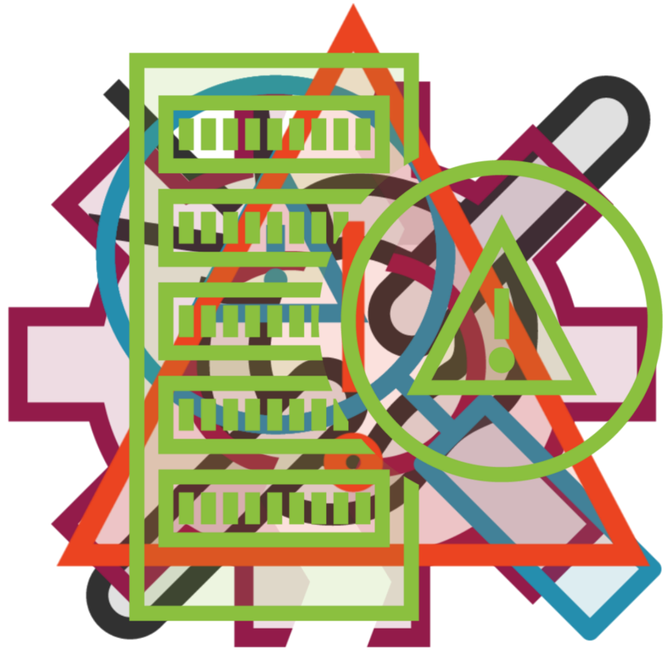
Top 10 Risks

- Insecure authorization
- Client code quality
- Code tampering
- Reverse engineering
- Extraneous functionality



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Anatomy of Attacking Mobile

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Bring Your Own Device (BYOD)

Mobile devices are a major target for attacks

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Mobile Attacks

- Phishing
- Clickjacking
- Buffer overflow
- Man-in-The-Mobile (MiTM)

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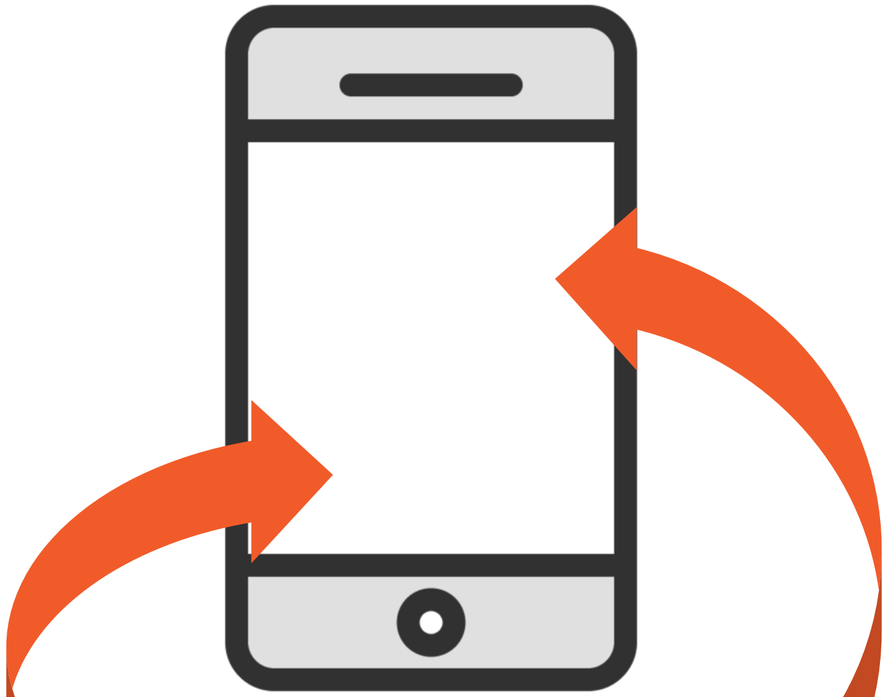

SMiShing

Baseband attack

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Weak passcodes

Jailbreaking

Cached data

Rooting

Preinstalled software

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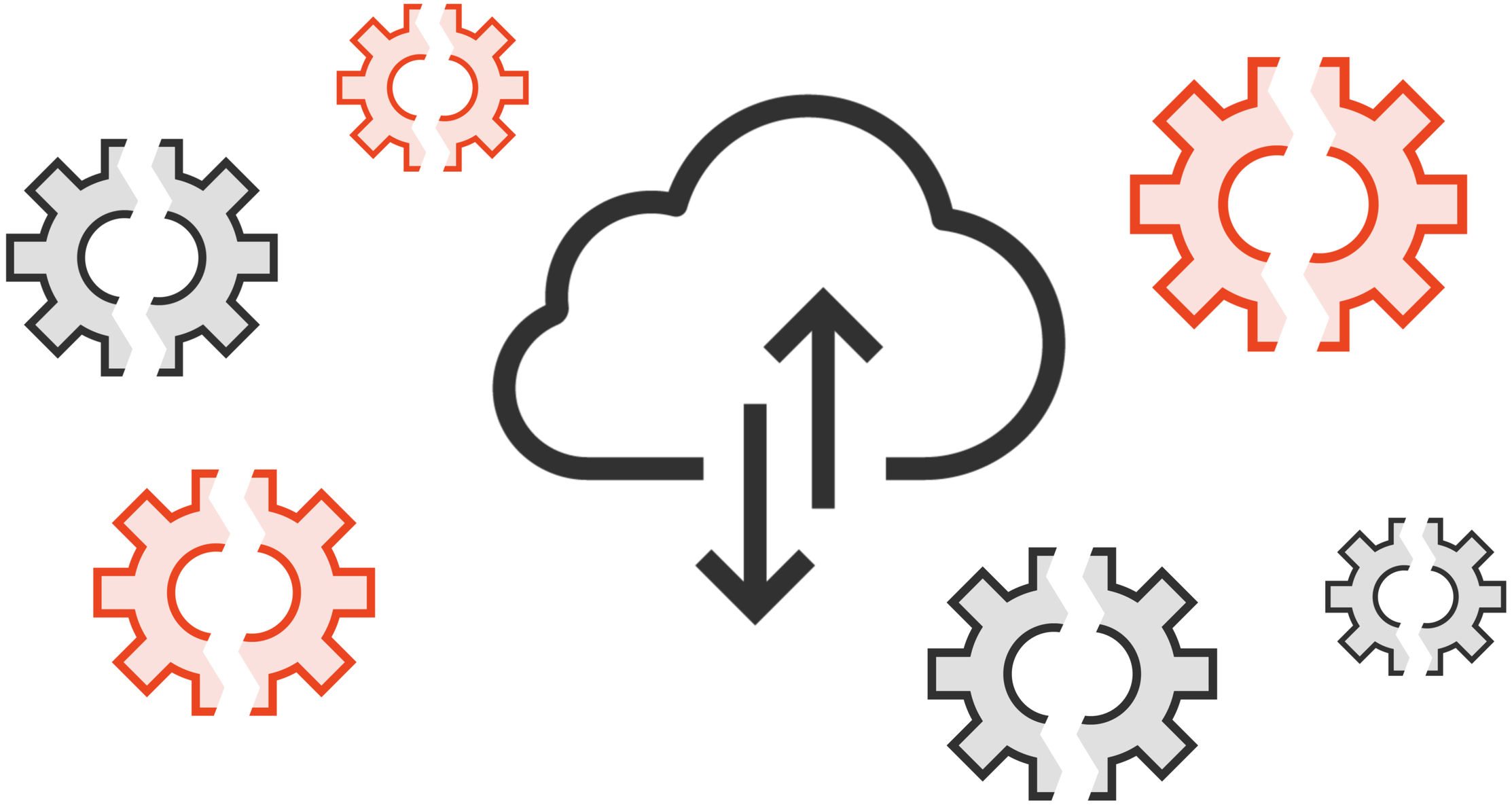

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Attack Vectors and Vulnerabilities

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Mobile Vulnerabilities

- Malware
- Data Exfiltration
- Data tampering

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Mobile Vulnerabilities

- **Apps and app stores**
- **Viruses, worms, and rootkits**
- **Data storage**
- **Copying information**
- **Social engineering**

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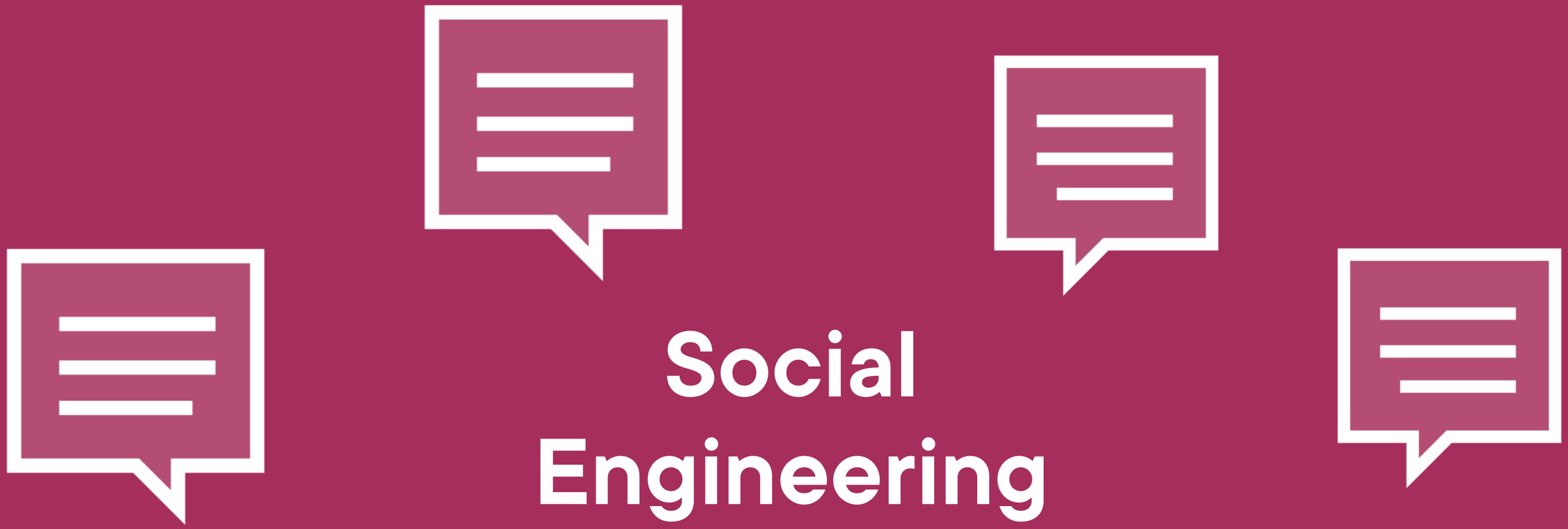

Social Engineering

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Mobile Vulnerabilities

- **SMS environment**
- **Drive-by**
- **Out dated operation systems**
- **Phishing**
- **Connections**

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Sandboxing

A method of restricting an app's access to certain resources in order to secure computers and users.

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Agent Smith, SS7 and Simjacking

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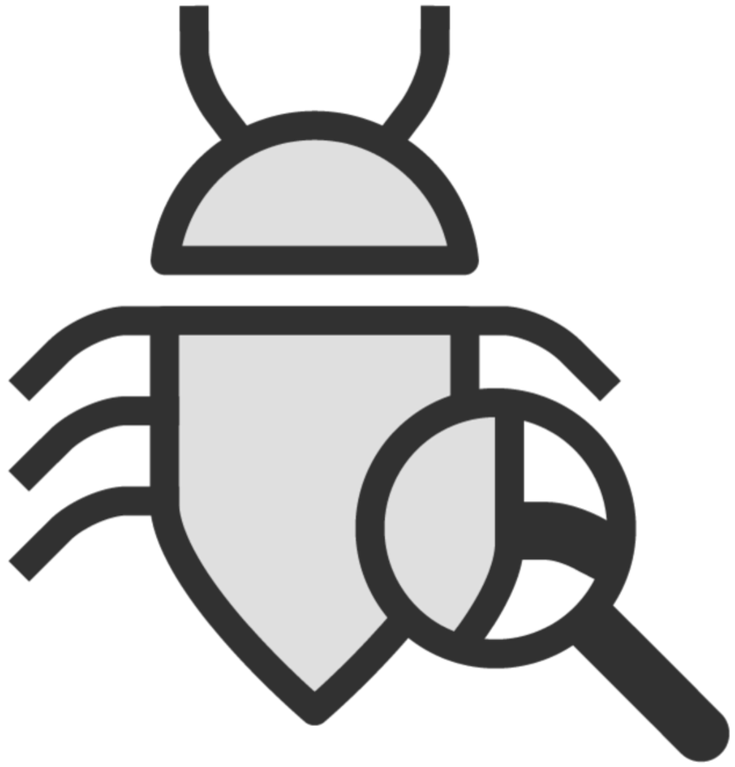

Agent Smith

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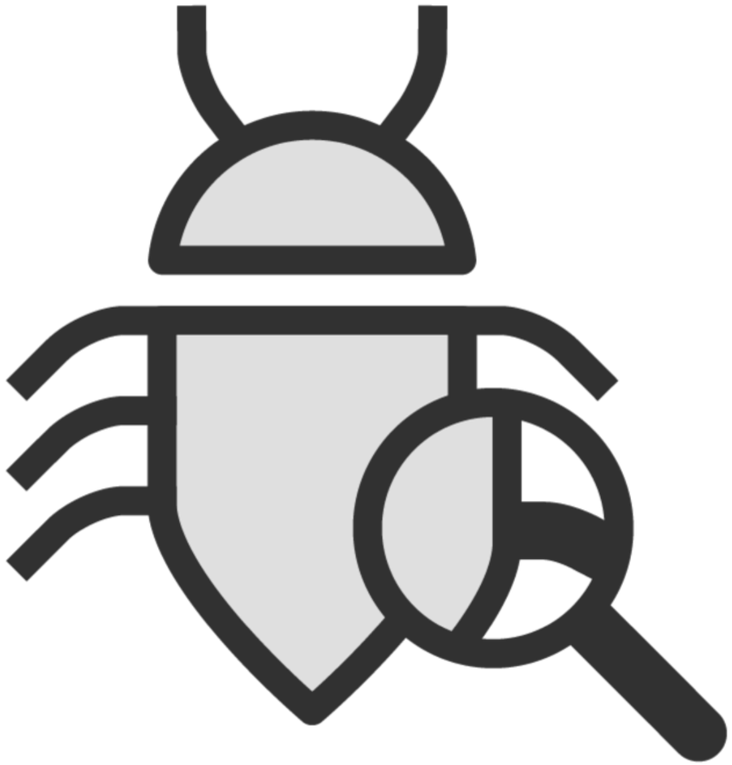
Agent Smith



Takes over a android device without the user's knowledge

Replaces a legitimate app with a malicious copy

Disguised as games, photo editors and other tools

Designed to look like system notifications

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Signal System 7

A cellular network protocol

Allows attackers to read messages, listen to calls, and track the device's location

Used to initiate MiTM attacks

By-passes 2FA and end-to-end encryption

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Simjacker

Associated to a SIM card's S@T browser

Sends an encrypted message to the network provider that contains your SIM card number and other details

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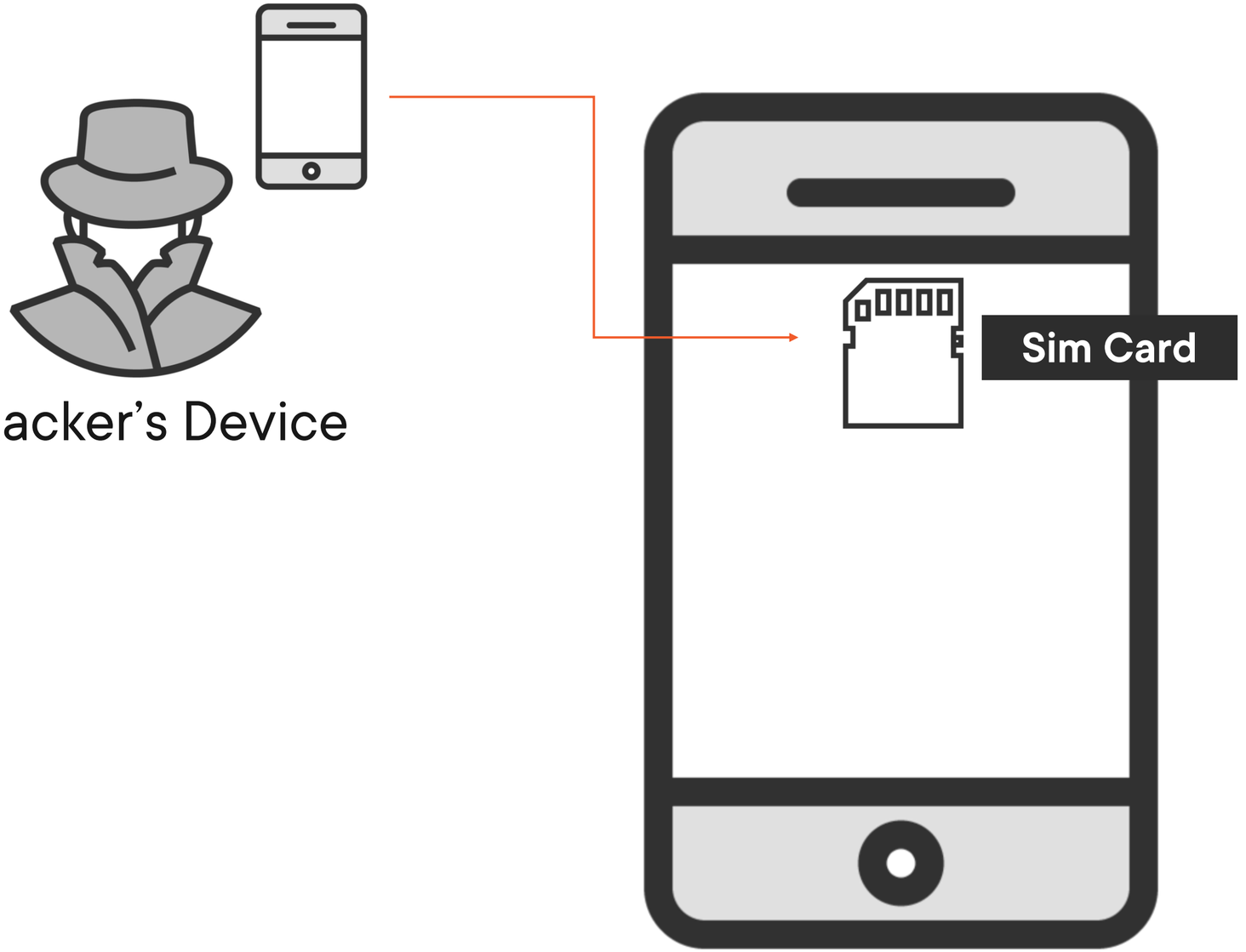

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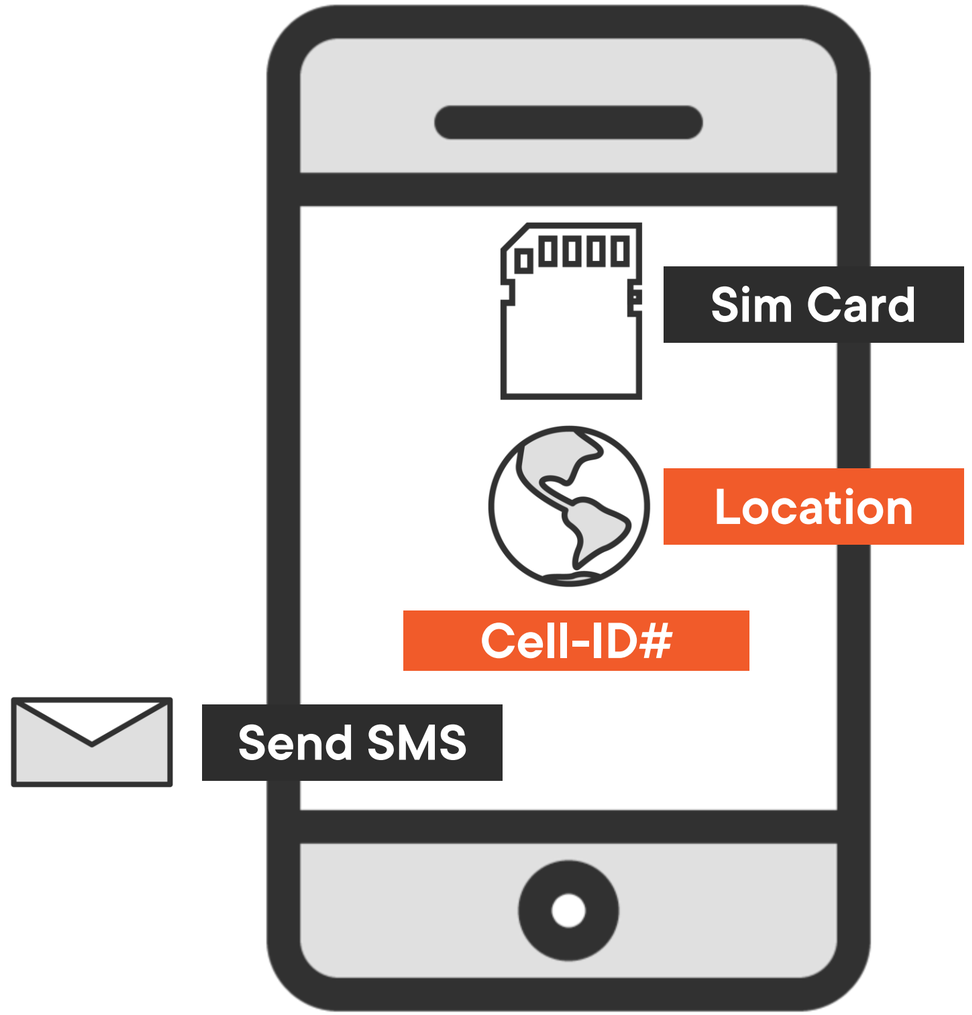

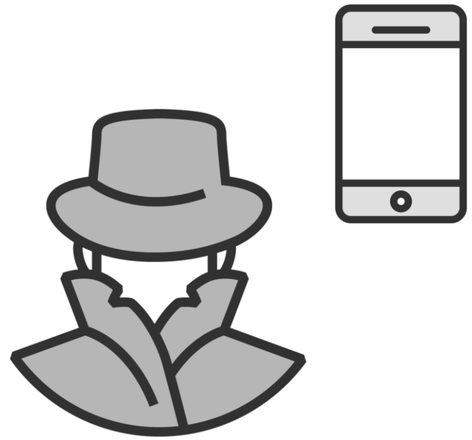

Attacker's Device

Cell-ID
and location

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Learning Check

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Learning Check

- **Man-in-The-Mobile (MiTM)**
- **Simjacking**
- **Drive-by**
- **Agent Smith**
- **SS7**

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Up Next:
Investigating Android Devices

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