Study Guide for Week #6

Module 6: Security issues in Physical Systems (Sensor, Actuators, Hardware) - Session Hijacking, Social Engineering

Material Outline

(1) Trends in IoT Devices
(2) IoT Communication
(3) IoT Attack Surface
(4) Defensive Security Measures
(5) Real-life Case
(6) Session Hijacking in IoT
(7) Social Engineering in IoT

Provided Documents

Documents	Description
Week6-WatchMEfirst	Video explaining the goals of this week
Week6-StudyGuide.pdf	The guiding documents for the materials covered in this week, student work, and learning outcomes of this week.
Week6-Slides.ppt	PowerPoint slides regarding security issues in physical systems, session hijacking and social engineering
Week6-Lecture	Video Lecture
Week6-PaperReading	A paper that talks about "Social Engineering in the Internet of Everything"
Week6-Resources: Reading -	A reading that shows how Amazon Alexan could

Documents	**Description**
> Hijacking on Amazon Alexa	be exploited for theft of voice history, PII and skill tampering
Week5-Resources: Reading -> Alexa and Google Home Vulnerabilities	Reading and video demonstration on how smart speakers can be exploited for phishing and eavesdropping.
Week6-Checklist	A checklist for your reference

Student Assignments

- Digest PowerPoint slides
- Watch the Lecture (or attend the in-person lecture)
- Read the Week 6 Material (All readings and papers provided)
- Finish and submit Lab #2
- Complete Quiz #2

Learning Goals

This module is part of the learning outcomes

(1) Describe the IoT devices vulnerabilities
(2) Describe session hijacking and social engineering in IoT devices