Security Analysis of Consumer IoT Devices

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Introduction
Internet of Things (IoT) devices are found everywhere, including in our homes, in healthcare, in education, and for entertainment.

As our lives become more dependent on these systems, their security and privacy practices is a growing concern.

This poster summarizes our study of security practices in a variety of consumer Internet of Things (IoT) devices [1, 2] & propose new sensor-assisted security protections against various attack strategies [3].

Study of Drones
A near-by attacker can take down a flying drone (from the Discovery family of drones) via the Telnet access.

Study of Computers
An attacker can make Modify sensitive files (via a misconfigured anonymous ftp login) to gain root access via Telnet.

Security Analysis of Cameras [2]

Sample of Consumer IoT Devices We Have in Our Lab

Cameras
Vehicles and Drones
Children Toys
Things & Hubs

Conclusion and Future Directions
Our systematic analysis identifies security practices & trends of IoT devices. We hope our work can be useful in evaluating future IoT (e.g., Industrial IoT) security proposals by showing common pitfalls in available technologies. We propose new tools to detect tampering of video feeds from security cameras.

Reference