Designing an Effective IoT Security Course
(Technical Report)

Developing an Effective Universal IoT Standard
(STS Research Paper)

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by

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Preface

The Internet of Things (IoT) is proliferating, but important problems of security, privacy, and equity have been neglected.

Developers of IoT devices must ensure security in development and implementation. Even many new IoT devices are vulnerable to exploits. To promote attention to privacy and security in IoT development, universities can introduce IoT security courses. Such courses would cover privacy and security aspects of hardware and their vulnerabilities. In a lab section, students would replicate previous exploits on old IoT devices. We propose an IoT security course outline with example lectures and labs for universities to implement. Through such a course, future IoT developers may adopt a security mindset for IoT systems.

A universal IoT security standard may improve IoT device security. Such a standard would protect consumers and improve manufacturer accountability. Tech companies, app developers, investors, the Consumer Technology Association (CTA), data brokers, and consumer advocacies are competing to influence the standards governing IoT.

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