An Academic Study on IoT Intrusion Detection Systems

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April 24, 2024

1 Abstract

The Internet of Things (IoT) has introduced new security challenges due to resource constraints and large-scale connectivity.

This paper presents an *academic overview* of intrusion detection systems (IDS) used in IoT environments, highlighting architecture, data sources, and limitations.

2 Introduction

IoT devices are widely used in *smart homes*, **healthcare**, and *industrial systems*. However, security remains a major concern.

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2.1 Why IDS is Needed

Traditional security solutions are **not suitable for IoT devices**.

Intrusion Detection Systems provide a second layer of defense.

2.1.1 Research Focus

- Network traffic data

- Sensor physical data

- Hybrid detection approaches

3 Text Formatting Examples

1. **Bold text example**

2. *Italic text example*

3. *Emphasized text example*

4. Underlined text example

- This is tiny text

- This is scriptsize text

- This is footnotesize text

- This is small text

- This is Large text

- THIS IS LARGE TEXT

- This is huge text

- This is Huge text

4 Font Family Examples

This is serif (roman) font.

This is sans-serif font.

`This is monospaced font.`

5 Line Spacing Example

This paragraph uses **single spacing**.

This paragraph uses **one and half spacing**.

This paragraph uses **double spacing**.

6 Conclusion

This document demonstrates a complete academic LaTeX project using only the commands introduced in the lecture slides.