SYNOPSIS

Project Group No: 24SOCU2119

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Project Title: DeviceSense: A Behavioral Approach to Identifying IoT Devices

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Abstract

In today's automation-driven world, IoT is indispensable, but security is paramount for detecting suspicious devices. However, accurately assessing device security levels poses challenges. To address this, we introduce IoTDevID, a machine learning-based method analyzing network packets to identify devices. Our approach stands out for its thorough feature analysis, offering a flexible framework with superior predictive accuracy. Notably, it excels in discerning devices using non-IP and low-energy protocols, setting it apart from traditional methods.

Specific Contribution

- Code Definition & PPT

Specific Learning

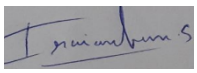
- Instead of using a single algorithm, combining different combinations of algorithms yields higher accuracy and precision.

Technical Limitations & Ethical Challenges faced

- Due to the large size of the text dataset, computational and running times are very high.
- We couldn't try all possible combinations of combining algorithms because we don't have very high configuration systems to run them.

Keywords: Device identification, IoT sentinel, Transfer problem, PCAP files and Individual packets.

Signature of the Student **Signature of Guide**



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