

# Data Analytics for Cybercrime and Undesirable Online Behaviors

# Cross-Device Tracking

# Anastasiia Iakovleva, Yannick Westermann

Date: November 27, 2023

#### Abstract

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

# Contents

1	Introduction	2
2	Cross-Device Tracking techniques 2.1 Deterministic Tracking	2 2 2 2
3	Methodology	2
4	Results	2
5	Comparative Analysis	2
6	Conclusion	2
7	Attachments7.1 Python Code7.2 Github Repository	<b>3</b> 3
8	References	3

#### 1 Introduction

This section introduces our research topic, outlines the problem, and provides an overview of our research objectives and the structure of our paper.

### 2 Cross-Device Tracking techniques

#### 2.1 Deterministic Tracking

Deterministic matching relies on known and verified user data, such as login information or email addresses, to connect devices. This method is more accurate than probabilistic matching but requires users to log in across multiple devices.

#### 2.2 Probabilistic Tracking

This method involves using various data points such as IP addresses, device types, browser fingerprints, and user behavior to create a probabilistic match between different devices.

#### 2.3 New Methods

Device Graphs, Cross-Device pixels, MAchine Learning Algorithms, Ultrasound Tracking

# 3 Methodology

In the methodology section, we describe the research methods, data collection, and analysis techniques we used in your study.

#### 4 Results

Here, we present the findings of our research based on the data analysis and discuss the results in the context of your research questions.

## 5 Comparative Analysis

In this section, we analyze an interesting comparison-based follow-up question

#### 6 Conclusion

The conclusion summarizes the key findings, the significance of your research, and offers recommendations or future research directions.

- 7 Attachments
- 7.1 Python Code
- 7.2 Github Repository
- 8 References