

A  
Major Project Report  
on  
**ADSHERLOCK EFFICIENT AND DEPLOYABLE CLICK FRAUD  
DETECTION FOR MOBILE APPLICATIONS**  
*Submitted*  
to  
**Jawaharlal Nehru Technological University, Hyderabad**  
*in partial fulfillment of the requirements for the award of Degree of*  
**Bachelor of Technology**  
*in*  
**Computer Science & Engineering**  
by

KADARI KRUTHI	(196Y1A0547)
CHENNA SHRAVANI	(196Y1A0522)
KANDHAGATLA SRUTHI	(196Y1A0551)

Under the guidance  
of  
**Dr. E. SUDARSHAN**  
Head of the Department



**Department of Computer Science & Engineering**  
**SUMATHI REDDY INSTITUTE OF TECHNOLOGY for WOMEN**

*(Approved by AICTE, New Delhi; Affiliated to JNTU, Hyderabad)*

Ananthasagar(Vill), Hasanparthy(M), Warangal – 506 371(T.S.), Website : [www.sritw.org](http://www.sritw.org)



**2022-2023**

*Rajam*  
**PRINCIPAL**

Sumathi Reddy Institute of Technology for Women  
Ananthasagar (V), Hasanparthy (M)  
WARANGAL - 506 371 (T.S.)

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



### CERTIFICATE

This is to certify that the major project entitled “**ADSHERLOCK EFFICIENT AND DEPLOYABLE CLICK FRAUD DETECTION FOR MOBILE APPLICATIONS**” is submitted by **K. Kruthi (196Y1A0547), Ch. Shravani (196Y1A0522), K. Sruthi (196Y1A0551)** and in the partial fulfillment of requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering during academic year 2022-2023.

  
**Dr.E.SUDARSHAN**  
Project Guide

  
**Dr.E.SUDARSHAN**  
Head of the Department

  
**EXTERNAL EXAMINER**

  
**PRINCIPAL**

Sumathi Reddy Institute of Technology for Women  
Ananthasagar (V), Hasanparthy (M)  
WARANGAL - 506 371 (T.S.)





## ABSTRACT

Without mobile advertising, there would be no mobile app ecosystem. It's clear that click fraud, where ads are clicked on by malicious code or bots, poses a serious threat to the sustainability of this ecosystem. Click fraud can now be detected by server-side analysis of advertising requests. Due to the simplicity with which the detection can be avoided, for example when the clicks are disguised behind proxies or are geographically separated, such methods may produce a large number of false negatives. In this paper, we provide AdSherlock, an efficient and deployable client-side (within-app) solution to click fraud detection in mobile apps. AdSherlock divides the computationally intensive phases of recognizing click requests into an offline and an online procedure. AdSherlock uses a probabilistic pattern-creation approach based on URL (Uniform Resource Locator) tokenization that operates in an offline mode. These patterns, in conjunction with an ad request tree model, are used to identify click requests in real time, thereby detecting click fraud. AdSherlock was put through its paces by creating a prototype and testing it with real-world applications. The online detector is built into the executable bundle of the program through binary instrumentation. When compared to other methods for detecting click fraud, AdSherlock performs better while practically never affecting system performance.



*Rijan*

**Principal**

Sumathi Reddy Institute of Technology for Women  
Ananthasagar (V), Hasanparthy (M)  
WARANGAL - 506 371 (TS)