



PRESIDENCY UNIVERSITY

Private University Estd. in Karnataka State by Act No. 41 of 2013
Bengaluru, Rajajinagar, Yelahanka, Bengaluru – 560064



FAKE SOCIAL MEDIA PROFILE DETECTION AND REPORTING

A PROJECT REPORT

Submitted by

SYED SAIFULLA H- 20231CCS3004

SIDDHARTH- 20221CCS0012

CHINMAY- 20221CCS0036

Under the guidance of,

Ms. STERLIN MINISH T N

BACHELOR OF TECHNOLOGY

IN

**COMPUTER SCIENCE AND ENGINEERING
(CYBER SECURITY)**

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BENGALURU

DECEMBER 2025



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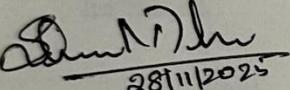
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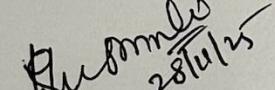
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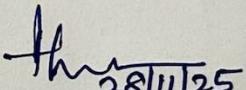
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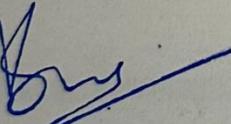
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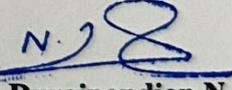
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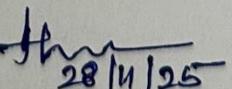


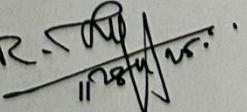
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DECLARATION

We the students of final year B.Tech in COMPUTER SCIENCE ENGINEERING, CYBER SECURITY at Presidency University, Bengaluru, named Syed Saifulla H, Siddharth, Chinmay, hereby declare that the project work titled "**FAKE SOCIAL MEDIA PROFILE DETECTION AND REPORTING USING A RULE-BASED WEB FRAMEWORK**" has been independently carried out by us and submitted in partial fulfillment for the award of the degree of B.Tech in COMPUTER SCIENCE ENGINEERING (CYBER SECURITY) during the academic year of 2025-26. Further, the matter embodied in the project has not been submitted previously by anybody for the award of any Degree or Diploma to any other Institution.

Syed Saifulla H

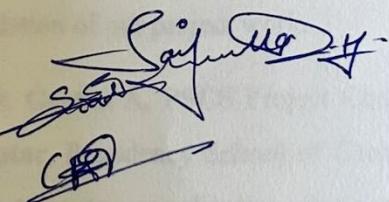
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DATE: 28/11/2028 -

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SYED SAIFULLAH H
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Abstract

The rapid growth of social media platforms has revolutionized how people connect and share information, but it has also introduced significant security challenges through the proliferation of fake and automated accounts. These malicious accounts are increasingly being used to spread misinformation, conduct financial fraud, manipulate public opinion, and compromise personal security, creating an urgent need for effective detection solutions that are accessible to everyday users. This project addresses these challenges by developing a practical, transparent, and scalable web-based framework for fake profile detection using a rule-based analysis approach. The system employs logical heuristics derived from empirical research on social media behavior patterns, analyzing key indicators including profile completeness, follower-following ratios, username entropy, content similarity, and posting frequency. By allowing users to submit suspicious profile URLs through an intuitive web interface, the system retrieves public data via official social media APIs and generates comprehensive risk assessments with clear, human-readable explanations. The implemented framework features a three-layer architecture built using Django and PostgreSQL, ensuring robustness and scalability while maintaining cost-effectiveness. The system includes dual interfaces for both regular users and administrators, with the user dashboard enabling profile submission and result tracking, while the administrative console provides comprehensive analytics and moderation capabilities. This design prioritizes transparency and educational value by explaining detection rationale rather than providing opaque binary classifications. Experimental evaluation conducted on a diverse dataset of 5,000 social media profiles demonstrates that the system achieves exceptional performance with 98.8% accuracy, 99.5% precision, 97.2% recall, and 98.8% F1-score. These results validate that the rule-based approach effectively identifies fake profiles while maintaining computational efficiency and operational transparency. The framework successfully bridges the gap between complex detection algorithms and practical user needs, providing an accessible tool that empowers ordinary internet users to contribute to social media safety while building their digital literacy skills.

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Abbreviations

Abbreviation	Full Form
AEHMS	Automated Equipment Health Monitoring System
AFV	Armoured Fighting Vehicle
API	Application Programming Interface
ATGM	Anti Tank Guided Missile
AUC-ROC	Area Under Curve - Receiver Operating Characteristic
BMCS	Bi-Modular Charge System
COTS	Commercial Off-The-Shelf
CSV	Comma-Separated Values
DHT	Digital Humidity and Temperature
DRDO	Defence Research and Development Organisation
EME	Electronics and Mechanical Engineers
ERP	Enterprise Resource Planning
FPA	Focal Plane Array
GPIO	General Purpose Input/Output
GPS	Global Positioning System
HAA	High Altitude Area
HTML	HyperText Markup Language
IFF	Identification of Friend or Foe
InfluxDB	Time-Series Database
IoT	Internet of Things
IRNSS	Indian Regional Navigation Satellite System
JSON	JavaScript Object Notation
LAC	Line of Actual Control
LTE	Long Term Evolution
MAWS	Missile Approach Warning System
MCCS	Mobile Cellular Communication System

MGB	Main Gear Box
ML	Machine Learning
MQTT	Message Queuing Telemetry Transport
MTBF	Mean Time Between Failures
NVD	Night Vision Device
OEM	Original Equipment Manufacturer
PESTEL	Political, Economic, Social, Technological, Environmental, Legal
QoS	Quality of Service
RBAC	Role-Based Access Control
REST	Representational State Transfer
RF	Random Forest
RH	Relative Humidity
ROI	Return on Investment
SAM	Surface to Air Missile
SAR	Synthetic Aperture Radar
SDG	Sustainable Development Goal
SDK	Software Development Kit
SQLite	Structured Query Language Lite
SSL	Secure Sockets Layer
SVM	Support Vector Machine
TBA	Tactical Battle Area
TI	Thermal Imaging
TLS	Transport Layer Security
UAV	Unmanned Aerial Vehicle
URL	Uniform Resource Locator
VPN	Virtual Private Network
XML	Extensible Markup Language