

# **FAKE SOCIAL MEDIA DETECTION**

**A PROJECT REPORT**

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*in partial fulfillment for the award of the degree of*

**BACHELOR OF TECHNOLOGY**

**IN**

**COMPUTER SCIENCE AND ENGINEERING**

**At**



**PRESIDENCY UNIVERSITY BENGALURU**

**MAY 2025**

# **PRESIDENCY UNIVERSITY**

## **SCHOOL OF COMPUTER SCIENCE ENGINEERING**

### **CERTIFICATE**

This is to certify that the Project report **FAKE SOCIAL MEDIA DETECTION** being submitted by Sony Priya, Fatima Noori and G Sarayu bearing roll number(s) 20211CCS0077, 20211CCS0029 and 20211CCS0123 in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering is a bonafide work carried out under my supervision.



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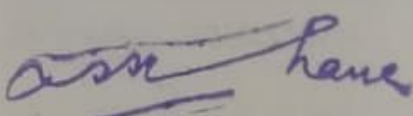
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**DECLARATION**

We hereby declare that the work, which is being presented in the project report entitled **FAKE SOCIAL MEDIA DETECTION** in partial fulfillment for the award of Degree of **Bachelor of Technology in Computer Science and Engineering**, is a record of our own investigations carried under the guidance of **Ms. Bhavya B , Assistant Professor, School of Computer Science Engineering & Information Science, Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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## ABSTRACT

The evolution of social media has transformed the way individuals interact, share information, and shape public opinion. Platforms such as Facebook, Twitter, Instagram, and others have grown into essential communication tools, yet they are increasingly exploited by malicious users, automated bots, and fake accounts. These elements are often used to manipulate opinions, spread misinformation, conduct phishing attacks, and engage in various forms of cybercrime. As a result, detecting fake entities and deceptive activities on social media has emerged as a critical area of research and development.

Fake social media accounts can be created for various harmful purposes, including the amplification of false narratives, cyberbullying, political propaganda, impersonation, and social engineering. These accounts often exhibit unusual activity patterns, unnatural linguistic behavior, and manipulated content sharing practices. To combat these threats, fake social media detection techniques have evolved from basic manual verification to highly advanced algorithmic solutions.

This report explores the current landscape of fake social media detection, highlighting a range of approaches such as rule-based filtering, machine learning classification, natural language processing (NLP), and deep learning. Machine learning models are trained on large datasets containing both genuine and fake account behavior, enabling them to learn distinguishing patterns based on features such as frequency of posts, sentiment analysis, profile metadata, engagement history, and follower-to-following ratios. NLP techniques assist in detecting spam-like or suspicious content, while graph-based algorithms analyze the relationships and interaction networks between users to reveal coordinated activity or bot networks.

The integration of artificial intelligence has significantly increased the accuracy and efficiency of detection systems. However, new challenges continue to arise, including the adaptability of fake accounts, use of AI-generated content, cross-platform anonymity, and privacy limitations in data access. Furthermore, ethical concerns related to data collection, user privacy, and freedom of expression must be considered when designing and deploying detection mechanisms.

Despite these advancements, fake social media detection faces several challenges. The adaptability of fake account creators, who often use AI themselves to mimic human behavior, creates a constant game of cat and mouse. Additionally, the vast volume of real-time data generated on platforms like Twitter, Instagram, and Facebook demands highly scalable and efficient systems. Ethical concerns also arise regarding user privacy and the possibility of false positives, where legitimate users may be incorrectly flagged as fake.

This report highlights the pressing need for interdisciplinary collaboration involving data scientists, cybersecurity experts, ethicists, and platform developers. The goal is to build transparent, ethical, and robust detection systems that can evolve alongside the changing tactics of malicious actors. Ultimately, improving the reliability of social media platforms is not only a technological challenge but also a societal responsibility, as these platforms continue to influence democracy, public health, and global discourse.

## ACKNOWLEDGEMENT

First of all, we indebted to the **GOD ALMIGHTY** for giving me an opportunity to excel in our efforts to complete this project on time. We express our sincere thanks to our respected dean **Dr. Md. Sameeruddin Khan**, Pro-VC, School of Engineering and Dean, School of Computer Science Engineering & Information Science, Presidency University for getting us permission to undergo the project. We express our heartfelt gratitude to our beloved Associate Dean **Dr. Mydhili Nair**, School of Computer Science Engineering & Information Science, Presidency University, and **Dr. Anandaraj S P**, Head of the Department, School of Computer Science Engineering & Information Science, Presidency University, for rendering timely help in completing this project successfully. We are greatly indebted to our guide **Ms. Bhavya B**, Assistant Professor and Reviewer **Ms Raeza**, School of Computer Science Engineering & Information Science, Presidency University for her inspirational guidance, and valuable suggestions and for providing us a chance to express our technical capabilities in every respect for the completion of the project work.

We would like to convey our gratitude and heartfelt thanks to the CSE7301 Capstone Project Coordinators **Dr. Sampath A K** and **Mr. Md Zia Ur Rahman**, department Project Coordinators **Dr. Sharmasth Vali Y** and Git hub coordinator **Mr. Muthuraj**. We thank our family and friends for the strong support and inspiration they have provided us in bringing out this project.

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