

FakeFinder: Social Media Fake Account Detection Using Machine Learning

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Reg.No: KTE21MCA-2019

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March 03, 2023



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Introduction

- Social media platforms are widely used by people at a daily basis
- The number of fake accounts created on these platforms are increasing
- Fake accounts are used to perform scams, impersonation, spreading misinformation etc.
- FakeFinder is a web app that uses machine learning to detect fake accounts
User has to provide the link to suspicious account

Current State of Art

- Manually verifying an account is difficult and time consuming
- Rule-based and network-based approaches can be bypassed
- Machine learning based systems provide an average accuracy result on detecting fake accounts

Motivation

- A large number of people has lost money and other valuable data from fake account scams
- Fake accounts degrade the credibility and trustworthiness of social media platforms
- There is no publicly available platform where users can verify the genuinity of an account.
The proposed system introduces a public platform for verification

Objectives

- Provide a public platform for the verification of fake accounts
- Improve the accuracy of fake account detection
- Contribute in improving the credibility and trustworthiness of social media platforms

Literature Review

Title	Author	Journal/Conference name	Year of publication	Techniques used	Pros and Cons
Identifying Fake Facebook Profiles Using Data Mining Techniques	Albayati Mohammed, Altamimi Ahmad	Journal of ICT Research and Applications	2019	K-means, K-medoids, Decision Tree, SVM	low accuracy
Detecting Fake Followers in Twitter: A Machine Learning Approach	Ashraf Khalil, Hassan Hajj-diab, Nabeel Al-Qirim	International Journal of Machine Learning and Computing	2017	Decision trees and random forest	Used large datasets but has limited scope
Identifying Fake Accounts on Social Networks Based on Graph Analysis and Classification Algorithms	Mohammadreza Mohammadrezaei, Mohammad Ebrahim Shiri, Amir Masoud Rahmani1	Security and Communication Networks	2018	Decision trees, SVM, Neural network	High accuracy but limited scope
Prediction of Fake Profiles on Facebook using Supervised Machine Learning Techniques-A Theoretical Model	Suheel Yousuf Wani, Mudasir M Kirmani, Syed mamu-IAnsarulla	(IJCSIT) International Journal of Computer Science and Information Technologies	2016	SVM, Neural network + Weka tool	Used ensemble classifier but has limited scope

Proposed Methodology

The proposed system is a web app that uses machine learning to detect fake accounts. Methodology includes :

- Data availability : Evaluating the data that can be accessed through social media APIs
- Data collection and preprocessing : A publically available dataset from Kaggle is used
- Training the model : Results from multiple models are compared
- Development : Django is used as the web framework

Proposed Methodology

- Users can input the link of suspicious account
- Application fetches the required data using API
- Returns the prediction result to user

Implementation Status and Plan

No	Tasks	Status	Completion Date
1	Literature Review	Completed	28/02/2023
2	Collecting Data	Ongoing	-
3	Data Preprocessing	NotStarted	-
4	Data Modeling	Not Started	15/03/2023
5	Model Validation	NotStarted	-
6	Model Deployment	Not Started	27/03/2023
7	Fine Tuning	Not Started	-
8	Web-Application Development	NotStarted	03/04/2023
9	Verification	Not Started	-
10	Testing	Not Started	25/04/2023

Thank You!