KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

Indian Institute of Science campus, Bengaluru

46th SERIES OF STUDENT PROJECT PROGRAMME

1.	**Name of the College : HKE SOCIETY'S SLN COLLEGE OF ENGINEERING**
2.	**Project Title : FAKE NEWS PREDECTION USING ML (Ref.No.** 46S_BE_2606)
3.	**Branch : COMPUTER SCIENCE ENGINEERING**
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7.	**Keywords:** Fake news detection, Misinformation detection, Disinformation detection, Information credibility, Fake news identification, Fact-checking, Text classification, Natural language processing (NLP), Machine learning,Social network analysis, Content-based analysis.
8.	**Introduction:** In the digital age, the pervasive spread of fake news has become a pressing concern, challenging the credibility of information and undermining public trust. Fake news refers to intentionally fabricated or misleading information disguised as legitimate news, with the aim of influencing public opinion, sowing discord, or achieving specific agendas. Detecting and combating fake news has emerged as a critical need to safeguard the integrity of information and preserve democratic processes.
	The consequences of fake news are far-reaching, impacting political discourse, social dynamics, and even personal beliefs. Recognizing the urgency of this issue, researchers and technologists have been actively developing techniques and methodologies to identify and combat fake news.
9.	**Scope / Objectives of the project :**
	Enhance information credibility: The primary objective of fake news detection is to ensure that accurate and reliable information reaches the public, enabling informed decision-making and fostering trust in media sources.
	Preserve democratic processes: By detecting and countering fake news, the objective is to protect democratic systems from the manipulative influence of misinformation, promoting fair and transparent political discourse.
	Mitigate social polarization: Fake news often amplifies existing social divisions and fuels polarization. Detecting and addressing fake news aims to minimize the negative impact of misinformation on societal harmony and unity.
	Foster media literacy: Educating individuals about the characteristics and detection of fake news is crucial to building media literacy skills, empowering them to critically evaluate information sources and distinguish between accurate news and false narratives.
10.	**Methodology :**
	Content-based analysis: Analyze the textual and visual content of news articles, including linguistic patterns, writing style, and image manipulation techniques, to identify potential signs of fake news or misleading information.
	Natural Language Processing (NLP) techniques: Utilize NLP algorithms, such as sentiment analysis, topic modeling, and text classification, to analyze the language used in news articles and determine the likelihood of them being fake or misleading.
	Machine learning algorithms: Train machine learning models using labeled datasets of fake and legitimate news articles to develop classifiers that can automatically distinguish between the two.

	Cross-referencing and fact-checking: Cross-reference news articles with multiple credible sources and fact-checking databases to verify the accuracy of the information and detect inconsistencies or contradictions.
11.	**Results and Conclusions of the project :** The expected outcome of fake news production using machine learning is to identify news articles that are like to be false or misleading, and distinguish them from real news articles. The goal is to help reduce the spread of false information and increase the accuracy and reliability of information available to the public. The output of the fake news prediction is in the form of binary representation/ labels (real or fake).
12.	**Scope for future work:** The scope of fake news detection encompasses various aspects related to identifying, analyzing, and mitigating the spread of misinformation and false narratives. It involves utilizing a range of techniques, technologies, and interdisciplinary approaches to address the complex challenges posed by fake news. The scope of fake news detection is dynamic and evolving, driven by advancements in technology, the changing nature of media consumption, and the emergence of new forms of misinformation. As the landscape of fake news continues to evolve, the scope of detection efforts must adapt and expand to effectively combat the spread of misinformation and ensure the availability of accurate and reliable information.

CERTIFICATE

Certified that the project titled **"FAKE NEWS PREDECTION USING ML"** has been successfully completed by Chandrashekar (3SL19CS013), Rajesh (3SL19CS036), Ravi Kumar (3SL19CS039),Vishal (3SL19CS056) during the academic year 2022-23. It is certified that all corrections/suggestions indicated have been incorporated in the project.

Signature of Guide

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