Project Initialization and Planning Phase

Date	01 November 2024
Team ID	SWTID1726834817
Project Title	Fake News Analysis in social media using NLP
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview	
Objective	Develop an NLP-based solution to detect and analyze fake news. The aim is to help identify misleading content, understand its patterns, and reduce the spread of misinformation
Scope	The analysis will focus on online news resources, social media content, and possibly other public data repositories where fake news frequently spreads. It will involve classifications, sentiment analysis and scoring.
Problem Statement	
Description	Fake news poses a threat to societies by spreading misinformation and influencing public opinion. Identifying and analyzing fake news can help in creating awareness and limiting its impact.
Impact	By detecting fakes news, this solution can contribute to more informed audiences and potentially reduce the spread of misinformation.
Proposed Solution	
Approach	Utilize machine learning and NLP techniques, such as text classification and linguistic feature extraction to detect patterns commonly found in fake news. Leverage pre-trained language models

	and fine-tune them on labeled datasets to classify news content as fake or legitimate.
Key Features	• **Real-time Analysis**: Detect and flag fake news in real time from various sources. • **Credibility Scoring**: Assign a credibility score to each piece of news. • **Pattern Detection**: Recognize linguistic and structural patterns characteristic of fake news.

Resource Requirements:-

Resource Type	Description
Hardware	
Computing Resources	CPU/GPU specifications, number of cores
Memory	RAM specifications
Storage	Disk space for data, models, and logs

Software		
Frameworks	Python frameworks	e.g., VSCode, Flask, CMD.
Libraries	Additional libraries	e.g., scikit-learn, pandas, numpy, pickle, etc.
Development Environment	IDE	e.g., Jupyter Notebook, Git
Data		
Data	Source, size, format	e.g., Kaggle dataset, 7796 rows x 4 columns, CSV file