PDA College of Engineering

## Department of Computer Science and Engineering

SYNOPSIS OF THE PROPOSED MINIPROJECT (22CSMP56)

ON

# Cyberbullying Detection on Social Media

Submitted by

Name : **MOHAMMED UMAR PATEL**

**MOHAMMED OMAR KHASDAR**

USN : 3PD23CS075

3PD23CS074

## Under the Guidance of

**Guide**

Name : DR.PRIYADARSHINI PATIL

Affiliation : CSE Department, PDA College of Engineering

**Academic Year : 2025-26**

##### Department Vision Mission Statement

##### Vision

To become a premier department in Computer education, research and to prepare highly competent IT professionals to serve industry and society at local and global levels.

##### Mission

* To impart high quality professional education to become a leader in Computer Science and Engineering.
* To achieve excellence in research for contributing to the development of the society.
* To inculcate professional and ethical behaviour to serve the industry

### 

## Title

**Cyberbullying Detection on Social Media**

## Introduction

The rise of social media platforms has revolutionized communication but also led to an increase in online harassment and abusive behavior. Cyberbullying, especially among teenagers, has become a critical issue, causing psychological harm, depression, and even self-harm in severe cases. Detecting such harmful content early is essential to ensure safer digital spaces.

The Cyberbullying Detection System aims to automatically identify and flag offensive or threatening messages on social platforms using Machine Learning (ML) and Natural Language Processing (NLP). The system can analyze user-generated comments, posts, or chats to detect bullying patterns and alert moderators or concerned authorities for quick intervention.

## Problem Statement

* Despite moderation policies, social media platforms struggle to control the spread of harmful or abusive content due to:
* The massive scale of user-generated data.
* Difficulty in detecting context-sensitive abusive language.
* Delayed manual moderation and reporting.
* Lack of intelligent, automated detection systems.
* To overcome these challenges, a data-driven ML model can help detect and prevent cyberbullying effectively.

## Objectives

* 1. To design an ML-based model that identifies abusive or threatening messages.
* 2. To classify text as normal, offensive, or threatening using NLP.
* 3. To assist moderators in maintaining safer online communities.
* 4. To promote digital well-being and reduce online harassment.

**Proposed Solution**

* **The proposed system uses Natural Language Processing (NLP) techniques to analyze text content and classify it as normal or abusive. It employs supervised learning models such as Logistic Regression, Naive Bayes, or Deep Learning (LSTM/CNN) to detect harmful language patterns. Once detected, the system automatically alerts moderators or sends notifications to parents (for minors), ensuring timely action and safer social interaction.**

## Implementation Tools

* Programming Language: Python
* Libraries/Frameworks: Scikit-learn, TensorFlow / Keras, NLTK, SpaCy
* Backend Framework: Flask / Django
* Database: MySQL / MongoDB
* Frontend: HTML, CSS, JavaScript (for admin/moderator dashboard)

### 

### 

### Impact

* The Cyberbullying Detection System promotes safe digital communication and helps prevent mental and emotional distress among social media users. It empowers online platforms with automated moderation tools, ensuring a respectful and inclusive online environment.