FEDERAL INSTITUTE OF SCIENCE AND TECHNOLOGY (FISAT)

Hormis Nagar, Mookkannoor PO, Angamaly, Kochi
Accredited by NAAC with 'A+' Grade

DEPARTMENT OF COMPUTER APPLICATIONS

SYNOPSIS OF THE MINI PROJECT

Name of the Student	RICHI ROY
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Name of Project Guide	Dr. Shahna K U
GitHub ID	https://github.com/R1CH1R0Y
Project Title	Communal Violence Monitoring and Prediction
Area of the Project	Natural Language Processing and Machine Learning
Date of Submission	03/01/2025

Description of Project:

The Communal Violence Monitoring and Prediction system leverages machine learning to detect and classify hate speech targeting specific races, religions, or other demographic groups from user-generated posts on a blog platform. It analyzes geographic hate speech density and predicts potential communal violence when thresholds are exceeded.

Functionality:

- Hate Speech Detection: Identifies and categorizes hate speech based on race, religion, or related demographics.
- Geospatial Analysis: Calculates hate percentages in regions to detect high-risk areas.
- Violence Prediction: Assesses the probability of communal violence using predefined thresholds.
- Interactive Dashboard: Displays trends, risk areas, and statistical insights.

Front End & Back End Tools	React.js, Django, MongoDB, TensorFlow/PyTorch, GeoPandas, and BERT.