**TWITTER DATA ANALYSIS TOOL**

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A Project report submitted in partial fulfilment of requirements for the award of degree of

**BACHELOR OF TECHNOLOGY**

**IN**

**COMPUTER SCIENCE AND ENGINEERING**

**(AI & ML)**

**by**

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**(Affiliated to JNTUA, ANANTAPURAMU)**

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**CERTIFICATE**

***This is to certify that the Project Work entitled*** ‘*Twitter Data Analysis Tool’* **is a bonafide record of work carried out by**

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**DECLARATION**

We hereby declare that the project titled “TWITTER DATA ANALYSIS TOOL**.**” is an authentic work carried out by us as the students of **G. PULLA REDDY ENGINEERING COLLEGE (Autonomous) Kurnool,** during 2024-2025 and has not been submitted elsewhere for the award of any degree or diploma in part or in full to any institute.

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**ABSTRACT**

**TITLE:** Twitter Data Analysis Tool

In the age of digital communication, social media platforms like Twitter have emerged as powerful mediums for public expression, opinion sharing, and trend dissemination. Analysing the vast volume of real-time data generated on such platforms can offer valuable insights into public sentiment, trending topics, and social behaviour patterns. This project presents the development of a comprehensive **Twitter Data Analysis Tool** that enables users to extract, process, and visualize tweet data based on user-defined keywords or hashtags.

Leveraging the Twitter API for data collection, the system performs sentiment analysis using the VADER (Valence Aware Dictionary and sEntiment Reasoner) model to classify tweets into positive, negative, or neutral sentiments. The tool incorporates a visually intuitive frontend built with React and a robust backend developed using Python and Flask. Key features include real-time tweet retrieval, sentiment categorization, interactive visualizations, and exportable analytical reports.

Designed for researchers, marketers, and data enthusiasts, this tool bridges the gap between complex sentiment analysis techniques and user-friendly accessibility. The project not only facilitates an enhanced understanding of public opinion but also establishes a scalable foundation for integrating advanced analytics such as topic modelling, trend forecasting, and geo-tagged sentiment mapping in future iterations.

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