

# UNIVERSITY OF MYSORE



## A Project Report on

### **“Sentiment Analysis of Social Media using Artificial Intelligence”**

*Submitted in partial fulfilment for the award of degree of Bachelor of Computer Application  
during the year 2024-2025.*

## **SUBMITTED BY**

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**DEPARTMENT OF COMPUTER APPLICATION**

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### CERTIFICATE

Certified that the project work entitled “**Sentiment Analysis of Social Media using Artificial Intelligence**” is a bonafide work carried out by **Sadiqua Simran A S (U01DG22S0038)**, **Saniya Banu (U01BP22S0046)**, **Ayisha Khan M J (U01BP22S0050)**, **Disha Anilkumar (U01BP22S0085)** in partial fulfilment for the award of degree of Bachelor in Computer Applications of University of Mysore, during the year 2024-25. The project report has been approved as it satisfied the academic requirements with the respect of the Project work prescribed for Bachelor of Degree.

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Signature of the project  
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Signature with date

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## DECLARATION

We, **Sadiqua Simran A S, Saniya Banu, Ayisha Khan M J, Disha Anilkumar** students of VI semester Bachelor of Computer Applications at **GSSS Simha Subbamahalakshmi First Grade College**, Mysore, hereby declare that the project dissertation work entitled “**Sentiment Analysis of Social Media using Artificial Intelligence**” has been carried out by us under the supervision of **Mr. H C Sudheendra Mouli**, Assistant Professor, Department of BCA, and the coordinator of project, submitted in partial fulfilment of the course requirement for the award of degree in Bachelor of Computer Application of University of Mysore, Mysore during the year 2024-2025. We further declare that the report has not been submitted to any other University for the reward of any other degree.

**Place: Mysore**  
**Date: 29-04-2025**

**Sadiqua Simran A S**  
**Saniya Banu**  
**Ayisha Khan M J**  
**Disha Anilkumar**

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## ABSTRACT

Sentiment analysis of social media content has become increasingly significant in understanding public opinion and behaviour. This study employs a combination of advanced machine learning algorithms—specifically, Random Forest and a hybrid model integrating Decision Trees (DT) with Logistic Regression—to enhance the accuracy and effectiveness of Sentiment classification. The Random Forest algorithm, known for its robustness and ability to handle large datasets, is used to capture complex patterns and interactions within the social media text data. Meanwhile, the hybrid DT + Logistic Regression approach leverages the strengths of both methods: Decision Trees for their interpretability and ability to model non-linear relationships, and Logistic Regression for its efficiency in binary classification tasks.

The integration of these algorithms allows for a more comprehensive analysis by combining the strengths of ensemble methods with logistic modelling. This methodological synergy not only advances the state of Sentiment analysis but also provides a scalable and adaptable framework for real-time social media monitoring and analysis. Furthermore, the study evaluates the performance of the proposed models against traditional techniques, demonstrating significant improvements in accuracy and computational efficiency. This research contributes to the ongoing efforts to refine Sentiment analysis tools and offers valuable insights for applications in market research, public relations, and beyond.