

Vishnu Vandana Devi V<sup>1</sup>, I.M.Khairdi<sup>2</sup>, Shikha Dutt Sharma<sup>3</sup>, Sonia Gouri<sup>4</sup>, Gourika Sharma<sup>5</sup>, Sashka Jovanovska<sup>6</sup>

<sup>1</sup>V R Siddhartha Engineering College, Kanuru, Vijayawada, India

<sup>2</sup>Department of English, C.B. Khedgi College, Akkalkot (MS).

<sup>3</sup>School of Humanities, K. R Mangalam University Gurugram 122103, India

<sup>4</sup>Applied Sciences SEEP, ABES Engineering College, Ghaziabad

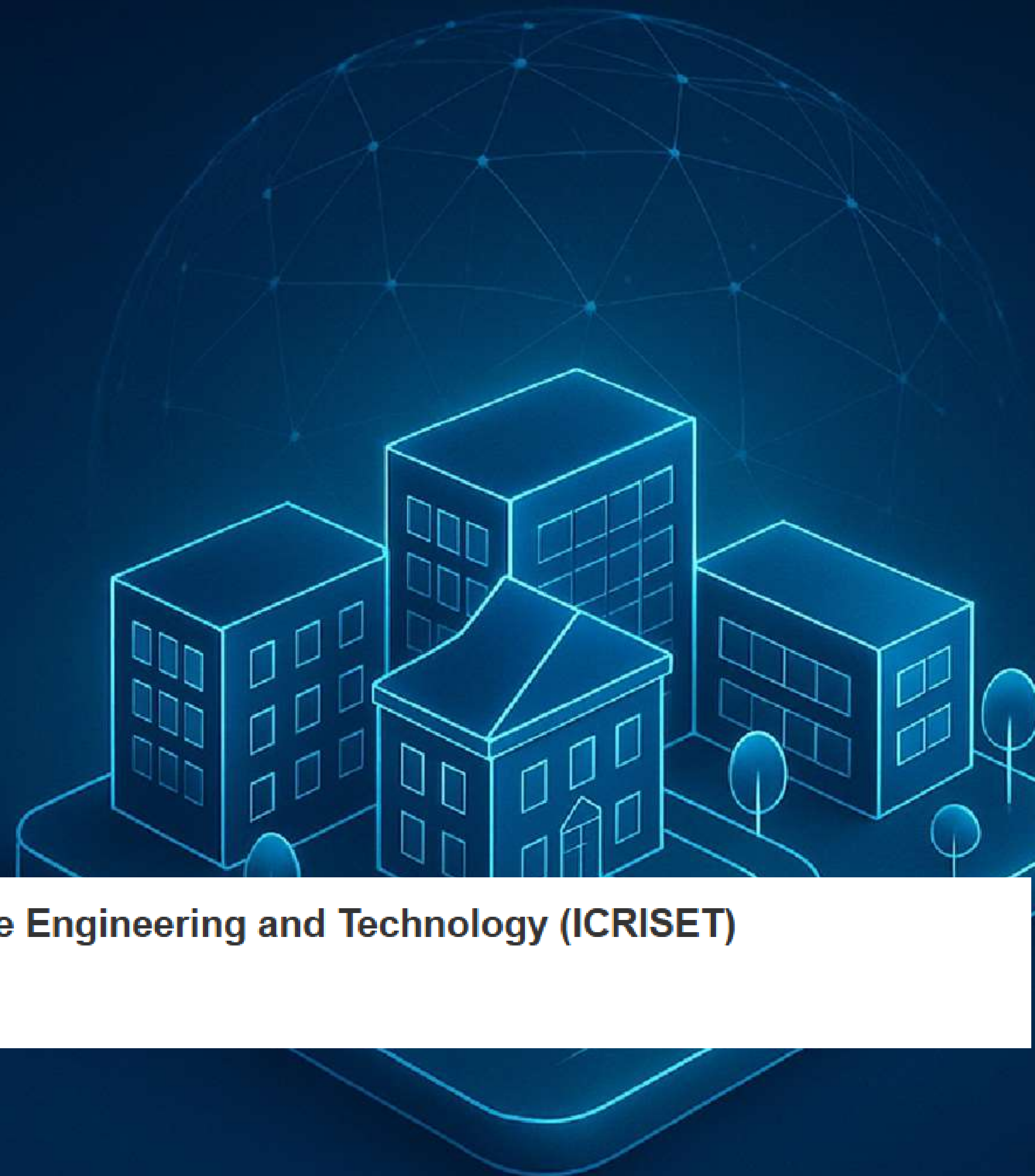
<sup>5</sup>Department of English, Ravenshaw University, Odisha, India

<sup>6</sup>Department of English Language and Literature, Faculty of Philology - Goce Delcev University, Krste Misirkov bb, Stip, Republic of North Macedonia.

# NLP-Based Framework for Detecting Linguistic Nuance in English Literature

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# Introduction to NLP and Literary Analysis



# Overview of Natural Language Processing

## Definition and Importance

Natural Language Processing (NLP) is a field of artificial intelligence that focuses on the interaction between computers and human language, enabling machines to understand, interpret, and generate text effectively.

## Key Techniques and Tools

NLP employs various techniques such as tokenization, sentiment analysis, and machine learning models. Popular tools include NLTK, Spray, and Transformer models for processing text data efficiently.

# Literary Analysis with NLP



## **Traditional vs. Modern Approaches**

Traditional literary analysis involves manual interpretation of texts, while modern approaches utilize NLP algorithms to analyze large volumes of literature, revealing patterns and trends not easily discernible by humans.



## **Benefits of NLP in Literature**

NLP enhances literary analysis by providing quantitative insights, facilitating data-driven research, and enabling the exploration of themes, motifs, and authorial styles across extensive literary corpora.

02

# Framework for Linguistic Nuance Detection

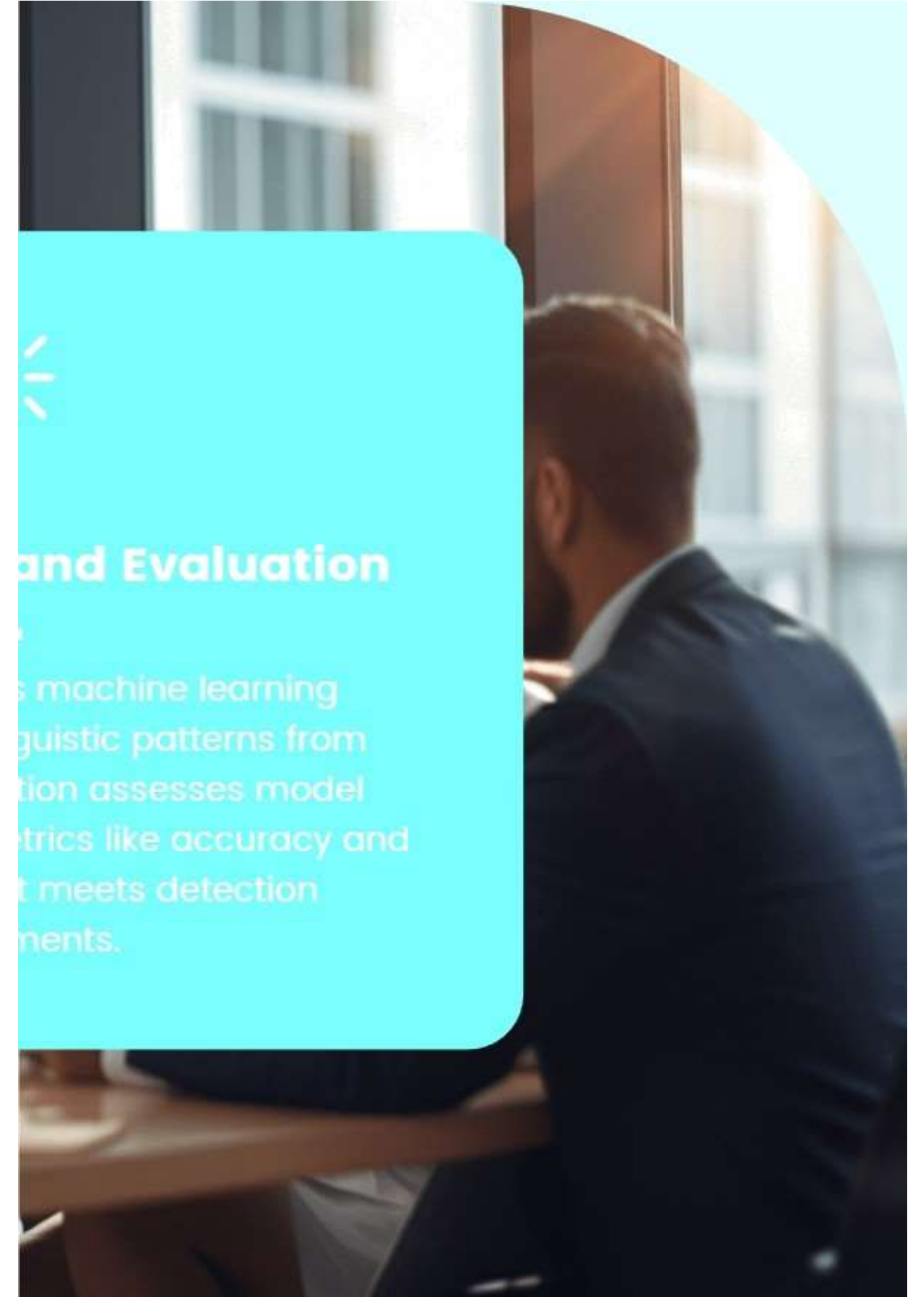


## Data Collection and Preparation

Data collection involves gathering diverse linguistic datasets that reflect various styles and contexts. Preparation includes cleaning, annotating, and structuring data for effective analysis and model training.

## and Evaluation

This machine learning  
linguistic patterns from  
tion assesses model  
etrics like accuracy and  
t meets detection  
ments.



# Applications and Examples



## Future Prospects and Challenges

Future prospects include integrating advanced AI techniques to improve nuance detection. Challenges involve addressing cultural context variability and ensuring models remain unbiased and adoptable across diverse linguistic backgrounds.

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# Thanks

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