

# CSD TEAM – 14

## NEXT WORD PREDICTION

### TEAM DETAILS

TORATI J V CHANDRA SATISH (TL)

KARRI JOHN

M MANMOHAN REDDY

M SATYA VENKATARAO

A SURYA VARA PRASAD

### Abstract:

Next word prediction is a fundamental task in natural language processing (NLP) that aims to predict the most likely word following a given sequence of words. This task has significant applications in text completion, search engines, and language translation. In this work, we explore the use of Long Short-Term Memory (LSTM) networks, a type of recurrent neural network (RNN), for next word prediction. LSTM models are particularly suited for sequential data, as they can capture long-range dependencies and maintain context over extended sequences. The proposed model is trained on large-scale text corpora to learn the complex patterns and structures of language. We demonstrate that the LSTM-based approach outperforms traditional models in

terms of prediction accuracy and fluency. Additionally, we evaluate the model's performance across various metrics and datasets, showcasing its potential for real-world applications such as text prediction in chatbots, auto-correction systems, and voice assistants.