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Pothavarappadu (V), (Via) Nunna, Agiripalli (M), Krishna Dist., PIN: 521212, A.P, India.

## PROJECT TOPIC

## **EMAIL SPAM DETECTION USING DEEP LEARNING**

## **ABSTRACT:**

Email communication, short for electronic mail communication, is a fundamental and widely used method for exchanging digital messages between individuals, organizations, and businesses. It has become an integral part of modern life, both for personal and professional purposes.

However, the rapid increase of email spam poses significant challenges to the efficiency and security of this communication medium. Email spam not only inundates inboxes with unsolicited and often malicious content but also hampers productivity and potentially exposes users to various cyber threats.

The significance of email spam detection lies in its ability to filter out unwanted, irrelevant, and potentially harmful messages, ensuring that users receive only legitimate and desirable emails. It is crucial for individuals, organizations, and email service providers to deploy robust spam detection mechanisms to maintain email communication's integrity and security.

We use Deep Learning Techniques like Long Short Term Memory ,etc., because Deep learning techniques have emerged as a powerful solution for combatting email spam. These algorithms can process vast email datasets, identify subtle patterns, and automate the spam detection process, enhancing efficiency and accuracy. The approach involves collecting a diverse dataset of emails, extracting features, and training Deep learning models to discern spam from legitimate messages. These models are then deployed in email systems for real-time classification, with continuous learning mechanisms ensuring adaptability to evolving spam patterns.

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