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(54) Title of the invention : DEEP CONVOLUTION FOREST FOR SPAM DETECTION IN TEXT

(51) International classification	:G06N0003040000, G06N0003080000, G06N0020000000, H04L0051000000, G06N0020200000	(71)**Name of Applicant :** 1)**St. Martin's Engineering College** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secundrabad ----------- ----------- **Name of Applicant : NA** **Address of Applicant : NA** (72)**Name of Inventor :** 1)**Dr. P Santosh Kumar Patra Professor, Dept. of CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 2)**C. Ushapriya Assistant Professor, CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 3)**Dr. R. Santhoshkumar Associate Professor and Head, CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 4)**V. Neeraja Assistant Professor, CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 5)**Dr. B. Rajalingam Associate Professor, CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 6)**Nakkala Priyanka Student CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 7)**Kondadi Sathwika Student CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 8)**Kalali Vishal Goud Student CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 9)**Amgoth Karthik Student CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 10)**Gajjala Akhila Reddy Student CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 11)**Rajat Mall Student CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 12)**R Samhitha Student CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 13)**K. Shravani Student CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- ----------- 14)**Puchala Sai Sushma Student CSE** Address of Applicant :St.Martin's Engineering College, Dhulapally Kompally Secunderabad ----------- -----------
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(57) Abstract :

Given that spam text is one of the primary causes in the diffusion of phishing attempts to steal sensitive data like credit cards and passwords, the rise in the usage of mobile messaging services has contributed to the proliferation of social engineering attacks like phishing. Additionally, false medical information and rumors about the COVID-19 pandemic are frequently disseminated on social media, instilling uncertainty and anxiety among the public. Filtering spam content is therefore essential to lowering risks and hazards. Prior research focused on machine learning and deep learning techniques to classify spam, but these techniques have two drawbacks. Deep neural networks demand a high computational cost, whereas machine learning models require manual feature engineering. This work presents a dynamic deep ensemble model for spam detection that automatically extracts features and modifies its complexity. Convolutional and pooling layers are used in the proposed model to extract features, while basic classifiers such random forests and much randomized trees are used to categorize messages into spam and valid texts. The model also uses ensemble learning techniques like bagging and boosting. A high f1-score, recall, and accuracy of 98.38% were obtained by the model as a consequence.

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