

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511062875 A

(19) INDIA

(22) Date of filing of Application :01/07/2025

(43) Publication Date : 18/07/2025

(54) Title of the invention : A SMART NETWORK TRAFFIC FILTERING DEVICE WITH ADAPTIVE LEARNING

(51) International classification :H04L0009400000, H04L0047244100, G06N0020000000, H04L0012140000, H04L0009320000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY

Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. -----

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)PREETI GUPTA

Address of Applicant :Department of Master of Computer Applications, Noida Institute of Engineering & Technology, Greater Noida. Greater Noida -----

(57) Abstract :

A smart network traffic filtering device (100) comprises a packet acquisition unit (102), adaptive learning engine (104), traffic classification module (106), feedback loop (108), packet decision unit (110), and secure interface (112). The device enables real-time classification and control of network packets using onboard adaptive learning. It reduces false classifications, supports encrypted traffic analysis, and self-updates filtering rules based on continuous feedback, enhancing both cybersecurity and bandwidth efficiency without requiring external rule databases or decryption processes.

No. of Pages : 15 No. of Claims : 5